VOL. IX. JULY, 1900. NO. 1.

THE LARYNGOSCOPE

AN INTERNATIONAL MONTHLY JOURNAL
DEVOTED TO DISEASES OF THE

NOSE-THROAT-EAR.

EDITOR.
M. A. GOLDSTEIN, M.D.
St. Louis.

ASSOCIATE EDITORS.
M. D. LEDERMAN, M.D.
New York.
S. SCOTT BISHOP, M.D.
Chicago.
W. SCHEPPEGRELL, M.D.
New Orleans.
F. B. EATON, M.D.
San Francisco.

EUROPEAN EDITOR.
STCLAIR THOMSON, M.D., M.R.C.P. Lond., F.R.C.S. Eng.
London.

ABSTRACT EDITOR.
FAYETTE C. EWING, M.D.,
St. Louis.

COLLABORATORS.
A. H. ANDREWS, M.D., Chicago; DR. ERNST DELSTANCHE, Brussels, Belgium;
D. W. DETWILER, M.D., Chicago; PROF. G. FERRERI, Rome, Italy;
F. W. FOXCROFT, M.D., Birmingham, Eng.; DR. GOTTLIEB KLAER, Copenhagen, Denmark;
E. D. LEDERMAN, M.D., New York; DR. W. OKADA, Tokio, Japan;
EDWIN PYNCHON, M.D., Chicago; R. M. ROSS, M.D., St. Louis; O. J. STEIN, M.D., Chicago;
A. LOGAN TURNER, M.D., Edinburgh, Scotland; P. WATSON WILLIAMS, M.D., Bristol, Eng.;
J. D. GIBB WISHART, M.D., Toronto, Canada; W. H. VITTUM, M.D., St. Paul, Minn.

FOR CONTENTS SEE PAGES 5 and 7.

Subscription, $3.00 per Annum, in Advance.

Foreign Subscription, 15 Shillings Per Annum, Post Free, Prepaid.

OFFICE OF PUBLICATION,

3702 OLIVE STREET, ST. LOUIS, MO., U. S. A.

FOREIGN OFFICE: BAILLIÈRE, TINDALL & COX,

20 KING WILLIAM ST., STRAND, LONDON, ENG.

[Entered at the Post Office at St. Louis, Mo., as Second-Class Matter, in July, 1896.]

(A Perfect Antiseptic Should be Effective and Harmless.)

OAKLAND HYDROGEN DIOXID

is *theoretically* and *practically* effective and harmless; it contains only one active ingredient, **OXYGEN,** the preponderating element in the healthy living organism.

It is indicated internally in all forms of dyspepsia and digestive disturbances, butyric fermentation, gastric catarrh, gastric ulcers, etc., externally as a local application in the treatment of specific inflammations of the mucous membrane, chronic inflammatory conditions characterized by fetid discharges and wherever morbid conditions or foul secretions exist.

"THE KIND THAT KEEPS."

Manufactured Only by

THE OAKLAND CHEMICAL CO.,

465 WEST BROADWAY, NEW YORK.

BAYER

PHARMACEUTICAL PRODUCTS

TANNOPINE
The INTESTINAL ASTRINGENT and DISINFECTANT
An agreeable, safe and efficient remedy in acute and chronic intestinal catarrhs and tuberculosis.
SOMATOSE
NUTRIENT TONIC, RESTORATIVE
LACTO-SOMATOSE
THE FOOD IN GASTRO-INTESTINAL AFFECTIONS
FERRO-SOMATOSE
THE FERRUGINOUS NUTRIENT
TANNIGEN
INTESTINAL ASTRINGENT
Highly recommended for the treatment of affections of the Gastro-intestinal tract attended with diarrhea.

FOR SAMPLES AND LITERATURE OF ABOVE PRODUCTS apply to

FARBENFABRIKEN OF ELBERFELD CO.
40 STONE ST. New York
P.O. BOX 2660.

CONTRIBUTORS OF
ORIGINAL COMMUNICATIONS TO VOL. IX.

BALLENGER, WILLIAM L., M.D., Chicago, Ill.
BISHOP, SETH SCOTT, M.D., Chicago, Ill.
CHURCH, B. F., M.D., Los Angeles, Cal.
COBB, FREDERIC C., M.D., Boston, Mass.
CURTIS, H. HOLBROOK, M.D., New York.
DUDLEY, WILLIAM H., M.D., Easton, Pa.
EATON, F. B., M.D., San Francisco, Cal.
FARRELL, T. H., M.D., Utica, N. Y.
FERRERI, PROF. GHERARDO, Rome, Italy.
FLEMING, E. W., M.D., Los Angeles, Cal.
FOSTER, HAL, A.B., M.D., Kansas City, Mo.
GALLOWAY, D. H., M.D., Chicago, Ill.
GIBB, JOSEPH S., M.D., Philadelphia, Pa.
GOLDSTEIN, M. A., M.D., St. Louis.
INGERSOLL, J. M., A.M , M.D., Cleveland, O.
JACKSON, CHEVALIER, M.D., Pittsburg, Pa.
KIMBALL, IRVING E., M.D., Portland, Me.
KING, GORDON, M.D., New Orleans, La.
KOYLE, F. H., M.D., Hornellsville, N. Y.
KYLE, D. BRADEN, M.D., Philadelphia, Pa.
LEDERMAN, M. D., M.D., New York.
LUCAE, PROF. DR. A., Berlin, Germany.
MCGAVREN, H. S., M.D., Sacramento, Cal.
MARTIN, W. A., M.D., San Francisco, Cal.
MURRAY, GILBERT D., M.D., Scranton, Pa.
PORCHER, W. PEYRE, M.D., Charleston, S. C.
PRICE-BROWN, J., M.D., Toronto, Canada.
PYNCHON, EDWIN, M.D., Chicago, Ill.
RICHARDS, GEO. L., M.D., Fall River, Mass.
RICHARDSON, C. W., M.D., Washington, D. C.
SCHEPPEGRELL, W., A.M., M.D., New Orleans.
STEIN, OTTO J., M.D., Chicago, Ill.
THOMPSON, JOHN A., M.D., Cincinnati, O.
WARD, M. R., M.D., Pittsburg, Pa.
WILSON, NORTON L., M.D., Elizabeth, N. J.
WISHART, D. J. GIBB, M.D., Toronto, Canada.
WRIGHT, JONATHAN, M.D., Brooklyn, N. Y.

ILLUSTRATIONS.

Adenoid Curette—Jackson 406
Antero-Posterior Curette-Forceps—Martin 117
Epithelioma of the Antrum of Highmore—Curtis 238
Forceps for Laryngeal Papilloma—Bishop 154
Laryngeal Abrasor—Ferreri 25, 26
Myxo-Fibroma from the Naso-Pharynx—Foster 33
Pressure Probe—Lucae 160
Saw for Operation on Nasal Septum—Pynchon 179
Septometer—Pynchon 180
Symmetrical Osteoma of the Nose—Stein 29
Tongue Scraper—Murray 265
Turbinotome—Jackson 404

INDEX.

ORIGINAL COMMUNICATIONS.

Abscess, Retropharyngeal 188
Adenoid Curette 406
Adenoids from the Standpoint of Hemorrhage 330
Adenoid Growths, Pathology of 327
Antrum of Highmore, Primary Epithelioma of the 237
Auricular Cataphoresis 100

Ballenger—Physiologic Tests as Aids to the Differential Diagnosis of Lesions of the Ear which Produce Deafness and Tinnitus 104
BIBLIOGRAPHY ..... 385—451
Bishop—Treatment of Acute Inflammation of the Middle Ear 407
Bishop—Treatment of Hay Fever 262

Carbolic Acid Used by Mistake as a Throat Spray 114
Carcinoma of the Larynx—Laryngectomy 242
Carmalt-Jones Spokeshave, A Note Upon the Use of the 21
Cataphoresis, Auricular 100
Cerebral Abscess Following Chronic Otitis Media Purulenta 257
Church—A Tick in a Man's Ear for Two Years 38
Cobb—Dentigenous Cysts 397
Curette, Adenoid 406
Curette-Forceps for Removal of Adenoids, Antero-Posterior 116
Curtis—Primary Epithelioma of the Antrum of Highmore 237
Cysts, Dentigenous 397

Deaf-Mutism, Hysterical 341
Deafness, Vibratory Massage in 157
Diagnosis of Lesions of the Ear which Produce Deafness and Tinnitus, Physiologic Tests as Aids to the Differential 104
Diseases of the Throat and Naso and Oro-Pharynx 265
Dudley—Cerebral Abscess following Chronic Otitis Media Purulenta 257

Ear, Tick in, for Two Years 38
Epithelioma of the Antrum of Highmore 237
Etiology of Retropharyngeal Abscess 188

Farrell—Primary Carcinoma of the Larynx 250
Ferreri—Auricular Cataphoresis 100
Ferreri—Laryngeal Abrasor 24
Fibroma Involving the Tympanic Cavity 35
Fleming—Case of Fibroma Involving the Tympanic Cavity 35
Formalin, Sarcoma of the Naso-Pharynx Cured by Injections of 192
Foster—Case of Removal of a Myxo-Fibroma from the Naso-Pharynx 33

Galloway—Carbolic Acid Used by Mistake as a Throat Spray 114
Gibb—Carcinoma of the Larynx—Laryngectomy 242

Hay Fever, Treatment of 262
Hemorrhage, Adenoids and 330

Ingersoll—Nasal Polypi in the Naso-Pharynx 111
Irregularities of the Nasal Septum, Slight 174

Jackson—Adenoid Curette 403
Jackson—Notes on Turbinotomy 406

Kimball—Adenoids and Hemorrhage 330
King—Hysterical Deaf-Mutism 341
Koyle—Case of Tic Douloureaux 253
Kyle—President's Address American Laryngological, Rhinological and Otological Society 317

Laryngeal Abrasor—Ferreri 24
Laryngectomy—Carcinoma of the Larynx 242
Laryngological and Rhinological Literature, Remarks on Recent 15
Larynx, Carcinoma of the ..... 242—250
Lederman—Nasal Synechia 332
Lucæ—Vibratory Massage in the Treatment of Progressive Deafness with Especial Consideration of my Elastic Pressure-Probe 157

McGavren—Spontaneous Cure of a Severe Mastoiditis 241
Martin—Antero-Posterior Curette-Forceps for Removal of Adenoids 116
Massage in Deafness, Vibratory 157
Mastoiditis, Spontaneous Cure of a Severe 241
Membrana Tympani, Traumatic Rupture of the 339

Q Gi3p L32
233801
L616.051 L32

ORIGINAL COMMUNICATIONS—Continued.

Myxo-Fibromata of Unusual Size..... 338
Middle Ear, Treatment of Acute Inflammation of the..... 407
Myxo-Fibroma from the Naso-Pharynx, Removal of..... 33
Murray—Diseases of the Throat and Naso and Oro-Pharynx..... 265

Nasal and Post-Nasal Synechiæ..... 182
Naso-Pharynx, Nasal Polypi in the.. 111
Naso-Pharynx, Removal of Myxo-Fibroma from the..... 33
Nose, Symmetrical Osteoma of the.. 27

Operation in Paralysis of the Vocal Cords..... 169
Osteoma of the Nose..... 27
Otitis Media Purulenta, Cerebral Abscess following Chronic..... 257

Pathology of Adenoid Growths..... 327
Physiology of Voice Production..... 93
Polypi in the Naso-Pharynx, Nasal.. 111
Porcher—Myxo-Fibromata of Unusual Size..... 338
Price-Brown—Nasal and Post-Nasal Synechiæ..... 182
Pynchon—Irregularities of the Nasal Septum..... 174

Remarks on Recent Laryngological and Rhinological Literature, Some Critical and Desultory..... 13
Richards—Traumatic Rupture of the Membrana Tympani..... 339
Richardson—Pathology of Adenoid Growths..... 327
Rupture of the Membrana Tympani, Traumatic..... 339

Sarcoma of the Naso-Pharynx Cured by Injections of Formalin.. 192
Scheppegrell—Physiology of Voice Production..... 93
Septum, Slight Irregularities of the Nasal..... 174
Spurs, Removal of Septal..... 21
Stein, Symmetrical Osteoma of the Nose with Report of a Case..... 27
Synechia, Nasal..... 332
Synechiæ, Nasal and Post-Nasal..... 182

Tests as Aids to the Differential Diagnosis of Lesions of the Ear Which Produce Deafness and Tinnitus, Physiologic..... 104
Thompson—Sarcoma of the Naso-Pharynx..... 192
Tic Douloureaux, Case of..... 253
Treatment of Acute Inflammation of the Middle Ear..... 407
Turbinotomy, Notes on..... 403
Tympanic Cavity, Fibroma Involving the..... 35

Vocal Cords, Operation in Bilateral Abductor, Paralysis of the..... 169

Ward—Retropharyngeal Abscess..... 188
Wilson—Early Operation in Bilateral Abductor Paralysis of the Vocal Cords..... 169
Wishart—Removal of Septal Spurs—A Note Upon the Use of the Carmalt-Jones Spokeshave..... 31
Wright—Critical and Desultory Remarks on Recent Laryngological and Rhinological Literature..... 13

BOOK REVIEWS.

Bacon—A Manual of Otology..... 314
Ballenger and Wippern on the Eye, Ear, Nose and Throat..... 396
Bulletin de la Societe Belge D'Otologie, de Laryngologie et de Rhinologie..... 464
Ferreri—Manual of Treatment and Operations on the Ear..... 315
Friedrich—Rhinology, Laryngology and Otology in their Significance in General Medicine..... 396
Ingals—Diseases of the Chest, Throat and Nasal Cavities..... 156

Injuries to the Eye in their Medico-Legal Aspect..... 156
Knopf—Pulmonary Tuberculosis: Its Modern Prophylaxis and the Treatment in Special Institutions and at Home..... 314
Shurly—A Treatise on Diseases of the Nose and Throat..... 464
Transactions of the Sixth International Otological Congress—Edited by E. Cresswell Baber..... 315

ABSTRACTS.

NOSE.

Atresia of the Choanæ, Congenital.. 233
Carcinoma of Nasal Passages 86
Cyst of the Nose, Echinococcus..... 86
Hemorrhage into the Conjunctival Sac through the Nasal Duct following Operation for Removal of Nasal Spur..... 85
Maggots in the Nose 148
Nasal Vestibule as the Seat of Disease 85
Ozena..... 233
Papilloma in the Vestibule of the Nose 463
Polypi, Removal of 107 at one Sitting 86
Relation between Nasal and Cranial Cavities 86
Sarcoma of the Nasal Mucous Membrane 456

MOUTH AND NASO-PHARYNX.

Bullous Enlargement of the Middle Turbinals 462
Calculus, Salinary..... 149
Carcinoma of the Tonsil 460
Excision of External Carotid for Inoperable Epithelioma of the Floor of the Mouth..... 460
Hypertrophy of the Turbinal Bodies 461
Inflammation at the Base of the Tongue as a Consequence of Angina Tonsillaris Lingualis, Infectious 87
Middle Turbinated Bone, Method of Operating Upon the 234
Mouth-Breathing..... 87
Nasal Diseases on Facial Expression, The Influence of 88
Odor from the Mouth, Remarks on Bad 149
Pemphigus of the Mucous Membrane as a Cause of Adhesion of the Soft Palate to the Posterior Pharyngeal Wall and Treatment of This Condition with Hard Rubber Bougies.. 88
Quinsy in Children 150
Retropharyngeal Abscess of Auricular Origin 149
Surgery of the Nose and Throat, Minor..... 87
Surgery of the Turbinated Bones..... 87
Tonsil, Operation on Pharyngeal; Hemophilia; Death 150
Tonsillitis and its Period of Incubabation, An Epidemic of Follicular 88

ACCESSORY SINUSES.

Displacements of the Eyeball by Diseases of the Frontal and Ethmoid Sinuses..... 462
Empyema of the Antrum by Resection of the Upper Part of its Nasal Wall, Treatment of Chronic 151
Empyema of the Antrum, Modern Treatment of Dental Cysts and..... 89
Empyema of the Frontal Sinus, Case of 89
Empyema of the Maxillary Antrum, The Diagnosis of Chronic..... 151
Frontal Sinus, Empyema of..... 234
Maxillary Sinuses, Foreign Bodies in 234

LARYNX AND TRACHEA.

Aphonia with Closure of the True and False Rima Glottidis at the Moment of Phonation, Hysterical 255
Epithelioma of the Epiglottis and Larynx..... 152
Epithelioma of the Trachea, Primary..... 90
Intubation of the Larynx 155
Laryngectomy and Excision of Part of the Trachea 456
Laryngis, Chorea..... 152
Tuberculosis of the Larynx 90

EAR.

Fibro-Angioma of the External Auricular Meatus, Endothelial..... 153
Local Anesthesia in the Ear, Production of..... 457
Middle Ear in Chronic Suppurative Diseases, Operative Opening of the 235
Necrosis of the Temporal Bone, following Scarlatina Complicated with Diphtheria 235
Otitis, Chronic Non-Suppurative Catarrhal 87
Vertigo of Meniere 463

MASTOID AND CEREBRAL COMPLICATIONS.

Cerebellar Abscess, Four Cases of.... 91
Mastoid, Sarcoma of the..... 153
Otitis Media, Case of Brain and other Abscesses following Tonsillar Abscesses and Non-perforative, Suppurative 91
Thrombosis, Infective Sinus 91
Diphtheria, Early Intubation in Laryngeal..... 92

ABSTRACTS—Continued.

DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

Diphtheria in the Horse 459
Diphtheric Sore of Lower Lip with Secondary Infection of the Throat 87
Esophagus, Surgical and Pathological Features of Tuberculosis of the 236
Strictures of the Esophagus with a Device for their Dilatation 92

INSTRUMENTS AND THERAPY.

Instrument, Laryngeal Papilloma Requiring a Special 154
Hay Fever, Treatment of 236

MISCELLANEOUS.

Angina with Endocarditis 90
Asthma, The Present State of our Knowledge of 461
Blindness Subsequent to Cauterization of the Nose, Case of Sudden 460
Hysteria, Some Ocular and Aural Manifestations of 92
Ring of Waldeyer Considered as a Road of Entry for Microbial Affections 463

SOCIETY PROCEEDINGS.

American Laryngological Association.

Atrophic Rhinitis 119
Cancer and the Treatment, Early Diagnosis of Laryngeal 125
Cyst of the Vocal Cord 195
Deviations of the Nasal Septum—Use of Fenestrated Forceps 198
Diagnosis of Laryngeal Cancer and the Treatment, Early 125
Fibroma of the Larynx 195
Faucetis due to the Bacillus of Friedlander, Recurring Membranous 121
Foreign Body with X-Ray Illustrations, Migratory 197
Fractures of the Nose 119
Hemorrhage from Peritonsillar Abscess 202
Injections in Pulmonary Tuberculosis, Tracheal 197
Instruments, New 125
Larynx, Pin in, for two Years; Removal by Endo-Laryngeal Methods 196
Middle Turbinated Bone, Bullons' Enlargement of 194
Operations upon Nose and Throat, Upright Position in Ether 124
Ozena of Probable Sphenoidal Origin, Case of 121
Paralysis of the Vocal Cords due to the Overuse of the Telephone. Partial 196
Positions in Ether Operations, Upright 124
Suprarenal Extract, Secondary Hemorrhage After Use of 194
Surgery of Turbinated Bodies, with New Method of Operating 201

American Laryngological, Rhinological and Otological Society.

Address of President 224
Adenoids, After-Treatment of 352
Adenoids from the Standpoint of Hemorrhage 351
Adenoids, Histology of, Operative Procedures for 351
Anesthesia in Children with Adenoids and in the Adenoid Operation 349
Carcinoma of the Larynx 270
Cornu Cutaneum Auris 276
Cysts of the Superior Maxilla, Dentigenous 276
Dissector and Knife for Tonsillar Abscesses, Blunt; Paracentesis Knife 224
Etiology of Retropharyngeal Abscess 230
Fibromyxomata of the Nose 225
Growths, Subglottic 269
Ligation of Internal Jugular for Septic Thrombosis following Purulent Otitis Media 277
Mastoiditis in Children and Adults, Abortive Treatment of Acute 357
Paralysis, Operation in Bilateral Abductor 225
Speech, Some of the More Common Forms of Defective 275
Supranenal Extract in Treatment of Nasal Hydrorrhea 273
Syrechia, Nasal 227
American Otological Society 80
Anatomy of the Eustachian Tube, Clinical 82
Caries of the Mastoid and Petrous Portions of the Temporal Bone, Extensive Acute 80

SOCIETY PROCEEDINGS—Continued.

Otitis Media, Followed by an Abscess in the Temporo-Sphenoidal and also an Abscess in the Cerebellum, Purulent ... 83
Thrombosis, Clinical History of a Fatal Case of Septic Sinus ... 82
Vertigo, Chronic Ear ... 81

British Medical Association (Section of Laryngology and Otology).

Address by the President, Scanes Spicer, M.D ... 294
Adenoids, Auditory Results of the Removal of Post-Nasal ... 424
Empyema, Two Cases of Chronic Frontal Sinus ... 432
Larynx, Pathology and Treatment of Toxic Paralysis of the ... 416
Thrombosis of the Lateral Sinus, Two Cases of ... 429
Treatment in Diseases of the Ear, Indications for the Intranasal ... 300

Chicago Laryngological and Climatological Society.

Anatomy and Pathology of the Pharyngeal Tonsil ... 141
Etiology and Prognosis of Hypertrophy of the Pharyngeal Tonsil ... 141
Hypertrophy of the Pharyngeal Tonsil ... 141
Symptoms and Diagnosis of Hypertrophy of the Pharyngeal Tonsil ... 142
Treatment of Hypertrophy of the Pharyngeal Tonsil ... 142

Laryngological Society of London.

Antrum, Distension of Maxillary ... 383
Aphonia, Case of ... 50
Carcinoma Laryngis ... 382
Cyst at Base of Tongue ... 383
Cyst of Turbinal Bone, Suppurative ... 46
Edema of One Ary-Epiglottic Fold, Growth in Neck Associated With ... 218
Edema of the Larynx, Acute ... 204
Empyema, Chronic Frontal Sinus ... 378
Empyema, Double Frontal Sinus and Antral ... 379
Empyema, New Instruments for Treatment of Antral ... 205
Empyema, Radical Operation for Chronic Frontal Sinus ... 222
Empyema, Six Cases of Frontal Sinus ... 59
Epiglottis, Ulceration of ... 217
Ethmoiditis Simulating So-Called "Clearage" of Middle Turbinate, Case of Chronic ... 214
Forceps, New Universal Laryngeal ... 207
Frontal Sinus Empyema ... 59
Growth, Laryngeal ... 220
Growth, Pharyngeal and Laryngeal ... 219
Hoarseness and Aphonia of Long Standing in a Girl æt. Thirteen ... 50
Hypertrophy of the Inferior Turbinals in a Boy, Case of Extreme ... 48
Inflammation of Crypts in Mucous Membrane Covering Defined Recess in Roof of Naso-Pharynx, giving Rise to Otalgia and other Symptoms ... 207
Laryngeal, Case for diagnosis ... 64
Laryngeal Whistling, Case of ... 54
Laryngitis, Hypertrophic, Case of a Girl with Hereditary Syphilis Causing ... 58
Larynx, Inter-Cordal Tumor of the ... 381
Larynx, Perichondritis of the ... 376
Larynx, Ulceration of the Case of ... 57
Larynx, Ulceration of ... 222
Lymphatics of the Face, Case of Obstructed Subdermal, in which Frontal and Antral Disease had been Suspected ... 57
Necrosis following Nasal Polypi and Sinus Disease, Case of Extensive ... 62
Occlusion in Typhoid Fever, Case of Laryngeal ... 379
Pachydermia Laryngitis, Case of ... 52
Paralysis, Bilateral Abductor ... 221
Pharyngeal Vessel, Case of Abnormal Pulsating ... 61
Pharynx and Larynx, Case of Malignant Disease of ... 62
Pharynx, Specimen of Curtain Ring Removed from ... 209
Polypi, Radical Operation for Nasal ... 377
Polypi Treated by New Radical Method, Two Cases of Nasal ... 209
Rhinoscleroma, Case of ... 55
Sarcoma of the Larynx ... 380
Sarcoma, Specimen of Larynx Removed on account of ... 57
Septum, Case of Tumor of Nasal ... 57
Sinus, Case Showing the Orifice of of Sphenoidal ... 382
Spur from Ethmoid, Specimen of Bony ... 46
Stricture Under Tubage for Twelve Months, Case of Esophageal ... 62
Tonsil Primary Sarcoma of the ... 375
Tonsillar Ulceration of Uncertain Origin ... 63
Tonsils in Woman æt. 39. with Secondary Syphilis, Enlargement of Laryngeal ... 217
Tonsil, Case of Pedunculated ... 384
Tracheotomy Tube, Difficulty in Removing ... 63

SOCIETY PROCEEDINGS—Continued.

Ulceration, Laryngeal 215
Ulceration of the throat for Diagnosis, Case of Extensive 49
Ulceration of Uncertain Origin, Case of Tonsillar 381

New York Academy of Medicine (Section of Laryngology and Rhinology.)

Aneurism of the Internal Carotid Artery, with Attacks of Epistaxis and Hemoptysis..... 134
Antrum Disease, and Unusual and Intracable Symptoms of..... 133
Antrum of Highmore, Diseases of 39
Deformities of the Nose, Surgical Treatment of the External..... 42
Edema of the Arytenoid Cartilage on the Right Half of Larynx, Extensive Unilateral 41
Galvano Cautery Device for Controlling the Edison Current Without the Use of a Motor 39
Nasal Calculus 136
New Instruments..... 133
Nose, Deformities of the External.. 42
Perforation and Deviation 139
Pharyngo, Mycosis, Pathology of.... 414
Sinus, Frontal, Abscess of, Operation, Recovery 40
Sarcoma of the Antrum..... 409
Speech, Diagnosis and Treatment of Some Functional Forms of Defective 412

San Francisco Society of Eye, Ear, Nose and Throat Surgery.

Cyst on Dorsum of Tongue 146
Affection of the Cavernous Sinus with Objective Tinnitus 146

Thirteenth International Medical Congress (Section of Laryngology and Rhinology).

Cancer, Diagnosis of Laryngeal..... 278
Cancer of the Larynx, Indications for Operation in, Gougenheim and Lombard 446
Cancer of the Trachea and Larynx, Palliative Treatment of—Use of Rubber Catheter as Tracheal Canula—Courtade 447
Catarrh of Frontal Sinus following Stenosis of Fronto-Nasal Canal, Recurrent Painful 364
Decortication of the Face 356
Diagnosis of Cancer of the Larynx, The Anatomo-Pathologic 278
Drills, Trephines, Saws, Gimlets, Operated by the White Engine or Electric Motor 367
Emphysema, Pulmonary..... 368
Ethmoiditis, Purulent 363
Intubations, External Manipulations Applied to Difficult Intubations 280
Laryngeal Tuberculosis by Intra-Tracheal Injections, Treatment of.. 283
Maxillary Sinus and Endo-Nasal Operation for Empyema of the Maxillary Sinus, Palpation of the 365
Modern Surgery of the Larynx—Glück 448
Paresthesia, Pathogeny and Treatment of Laryngeal..... 282
Rhinoscleroma, Operative Treatment 281
Salivation, Psychic 269
Sclerosis, Surgical Treatment of Aural—Botey 450
Sinusitis, Radical Operation of Combined Chronic 364
Sinusitis, Treatment of Maxillary, Ethmoidal and Frontal..... 368
Stenosis, Treatment of Tracheal 284
Stricture Treated by Electrolysis, Laryngeal..... 285
Surgery of the Facial Sinuses in its Relation to Surgery of the Orbit .. 366
Thyrotomy, Immediate and Remote Results of—Goris 444
Thyrotomy, Indications and Technique of..... 286
Thyrotomy, Indications for—Semon 443
Thyrotomy, Technique of—Schmiegelow 444
Tuberculosis of the Larynx, Primary 285

International Medical Congress (Section of Otology).

Acumetry—Hartmann 287
Anatomy of Acute Otitis Media 290
Acoustic Exercises for Deaf-Mutes Urbantschitsch ..... 369—371
Auricle, Neuroma of the..... 374
Curetting, Results Obtained in Sixty Cases of Chronic Dry Otitis Media by Petro-Mastoid—Malherbe 449
Delstanche, Eulogy on Dr. Charles 287
Hemorrhage in Woman of Sixty-Three Years, Recurring Double Auricular 373
Lesions in Acute Mastoiditis of Adults, Topography of the Bony.. 372
Lupus of the Face, Especially of the Auricle—Lang 449
Mastoiditis, Anatomical Details in Connection With the Etiology of Bezold's 371
Mastoiditis, Evolution of Non-Operated Cases of 292

SOCIETY PROCEEDINGS—Continued.

Mastoiditis of Bezold 292
Membrana Tympani, on the Finer Innervation of the 289
Acumetry, a plan for International Notation — Shiffers 288
Microphonic Studies Upon the Sound Conducting Apparatus 371
Othematoma 374
Otitis, Observations on Dry—Miot 449
Preparations of the Organ of Hearing, Transparent Microscopic 372
Pyemia, Case of Otitic 374
Sclerosis, Surgical Treatment of Aural—Siebenmann 450
Sound Waves and Number of Vibrations Determined by Means of Kundt's Figures, Length of 289
Tricophytosis of External Auditory Meatus 291

Western Ophthalmologic and Oto-Laryngologic Association.

Decalcified Head-Sections 79
Etiology of Malignant Tumors 79
Larynx, Primary Tuberculosis of the 70
Middle Turbinate for the Cure of Some Forms of Inveterate Eye Disease, Removal of the 79
Parotitis Persisting for Ten Years in a Healthy Child, Recurring 69
Physiology of Voice Production 74
Polypi Removed at one Sitting, Presentation of Specimens of 107 79
Septum, Slight Irregularities of the Nasal 66
Tests of the Organ of Hearing as Aids in the Differential Diagnosis of Lesions of the Ear, The Physiologic 78
Tuberculosis of the Ear, Primary 70

AUTHORS.

Abrams, A. E 236
Abrahams, J. H 133
Avellis, George 88
Bacon, Gorham 83
Baker, A. R 460
Ballenger, W. L 78
Bar, L 291
Bartlett, Willard 236
Bayer 87
Berens, Bernards 273
Bernheim, Samuel 285
Bishop, S. S 154
Blake, J. A 460
Booth, Burton S 134
Boschi, E 90
Bosworth, F. H 363
Botey, Ricardo 282, 450
Boulay, M 285
Boylan, J. C 201
Bresgen, Maximilian 85
Bristow, A. T 456
Burnett, C. H 81
Butlin 376
Chappell, W. F 201
Clark, Payson 194, 195, 462
Clevenger, W. F 85
Cobb, F. C 352
Cohen, J. Solis 131
Corbett, Louis 459
Corbin, F. G 148
Cousteau 368
Courtade, A 447
Croly, H. Gray 152
Dabney, S. G 90
Davidson, J. P 234
Davis, H. A 46, 48
Davis, Henry J 217
DeBlois, T. A 119
Delavan, D. Bryson 131
Downie, Walker 375
Eliot, Johnson 87
Escat 280
Ewing 69
Farlow, J. W 121
Fränkel, B 149, 278
Freer, Otto H 142
French, Thomas R 124
Glück 448
Goldstein, M. A 70
Goodale, J. L 86
Goodwillie, D. H 42
Goris 365
Gougenheim, A 446
Grant, Dundas 55, 57, 63, 218, 219, 381
Gray, A. A 457
Greene, D. Milton 91
Grossard 373
Guye, A A 371
Hajek, M 363
Halstead, T. H 348
Hammerschlay, Victor 235
Hanszel, Friedrich 149
Harris, Thomas J 133
Hartmann, A 288
Hellat, P 279
Hermann 235

AUTHORS—Continued.

Holmes, C. R. 461
Hopkins, T. E. 194
Horne, Jobson 51, 217
Ingersoll, J. M. 87
Joncheray 374
Jacques, M 289
Johnston, Samuel 118
Kapariantz 365
Kayser, R. 88
Kelson 220
Krauss, W. C. 86
Kyle, D. Braden 414, 224
Lack, Lambert 209, 383
Lake, Richard 46
Lang 449
Lannois 374
Laurens, Georges 365
Law, Edward 215
Lederman, M. D. 225, 227
Leonhard, M 372
Lester, John C. 276
Luc 364
Loeb, H. W 79, 86
Logan, Jas. E. 119
Lombard, E. 446
Lower, William E. 92
Lutz, Stephen A 153
Mackenzie, G. Hunter 157
Mackenzie, John N. 125
Mader, M 371
Makuen, G. Hudson 275, 412
Malherbe, A. 449
Mayer, Emil 38, 39, 121
McBride, P. 300
McKeown, David 424
McKernon, J. F 357
Melzi, Nolan 149
Melzi, Urbano 153
Mendoza, Suarez de 367
Miot, M. 449
Molinié 292
Montenyohl, E. A. 460
Morf, J. 233
Moure, E. J. 292
Morganthau, George 142
Myles, Robert C. 269
Navrail, Emeric 281
Onodi, A 152
Panzer 290
Parker, Chas. A. 52, 377
Payne, Redmond 146
Peet, Edward W. 136
Pfingst, A. O 150
Phillips, Wendell C. 38, 409
Pieniazek 284
Pierce, Norval H. 224, 351
Pirera 463
Pritchard, Urban 463
Politzer, Prof. A. 287, 449
Potter, Furniss 219
Powell, Fitz Gerald 217, 383
Pynchon 66
Quinlan, Francis J. 41, 409
Randall, B. Alex 82, 91
Reale 463
Rice, C. C. 196
de Roaldes, A. W 196
Richards, Geo. L. 87
Risley, S. D. 462
Roe, Jno. O 87, 198
Roeger 90
Rogers, F. T 89
Rogers, W. K 86
Roth 235
Roughton 63
Sachs, Richard 89, 150
de Santi 50, 51
Scheppegrell 75
Schwendt, M 289, 371
Semon, Sir Felix 54
Stein, Otto J 78
Schiffers 287
Schmidt, M 278
Siebenmann, F. 151, 233, 450
Siegert, F 88
Spicer, Scanes 49, 65, 294
Stillson, J. O. 79
Stucky, J. H 87
Symonds, Charters 62
Taptas 364
Thrasher, A. B 195
Terry, R. J. 79
Tilley, Herbert 51, 59, 61, 214, 222, 378
Thomson, StClair 58
Tuckerman 92
Turner, Logan 204
Urbantschitsch, V 369
Urunuela 286
Vacher, Louis 283, 368
Waggett 379
Wagner, Henry L. 146
Ward, M. R. 230
Whalen, Chas. J. 155
Wells, W. A. 461
Wenner, R. J. 234
White, J. A 351
Whiting, Fred 91
Williams, P. Watson 207, 416
Wilson, N. L. 225
Wingrave, Wyatt 221
Winckler 234
Wishart, Gibb J 150
Wright, J 139
Woods, Hiram 82
Yearsley, Macleod 62
Zaalberg 374

THE

LARYNGOSCOPE.

VOL. IX. ST. LOUIS, MO., JULY, 1900. No. 1.

ORIGINAL COMMUNICATIONS.

(Original communications are received with the understanding that they are contributed exclusively to THE LARYNGOSCOPE.)

SOME CRITICAL AND DESULTORY REMARKS ON RECENT LARYNGOLOGICAL AND RHINOLOGICAL LITERATURE.

BY JONATHAN WRIGHT, M.D., BROOKLYN, N. Y.

(Eleventh Paper. Second Series.)

The impossibility thus far experienced in explaining how the cerebro-spinal fluid can escape spontaneously from the nose has hitherto prevented rhinologists from hazarding the statement or entertaining the belief that certain cases of rhinorrhea are the clinical manifestations of this phenomenon. No such consideration, however, has deterred StClair Thomson. In a most interesting and exhaustive brochure (The Cerebro-Spinal Fluid; Its Spontaneous Escape from the Nose—London) he not only announces this as his belief, but he also frankly admits the absence of any satisfactory anatomical proof of the existence of a direct communication between the cerebral ventricles and the intranasal chambers. He reports one case himself and collates the reports of twenty others, in the great majority of which he, by absolute proof or by the strongest argument, establishes as a fact the assumption frequently advanced by others, that the fluid draining from the nose in these cases *is* cerebro-spinal fluid. In his own case by careful chemical analysis he not only conclusively established the origin of the flow, but he has added very materially to our knowledge of the chemistry, the physiology and the dynamics of the body fluids. In a few of the cases the reports of which he discusses, however, he allows his enthusiasm to carry him further than the facts at his disposal would seem to warrant.

The fluid which drained away from the nose in his case and in nearly all the others approximated in quantity to half a litre a day, five to ten drops a minute, sleeping and waking. Much discomfort was experienced by these sufferers from the fluid running into the naso-pharynx during sleep. Dr. Thomson's work will be found of great value as furnishing a guide for differential diagnosis in cases of rhinorrhea. The points to be remembered are:

1. The chemical characteristics of the cerebro-spinal fluid.
2. The dripping guttatim from one nostril, rarely from both.
3. The rapidity of the flow is increased by abdominal straining with closed glottis.
4. Its continuance at night.
5. It is continuous, and not diminished and increased under special conditions of weather or other influences, although it may stop for days or months or years and then start up again.
6. It is frequently accompanied by cerebral symptoms.
7. It is an affection of adult life.
8. The quantity per diem approaches a half litre.
9. Treatment is of no avail.

Hydrocephalus both early and late has existed in some cases. In others there is a history of injury, but in many the condition existed without any such history, occasionally without another symptom. Occasionally it stopped spontaneously. There is one statement which is of more than usual interest to me and that is in regard to the sterility of the fluid escaping. Bacterial examination showed that it was almost entirely free of germs. From this fact Dr. Thomson derives further support for the accuracy of his observations in regard to the sterility of the nasal fossæ. It may be remembered that Dr. Park (*N. Y. Med. Journ.*, February 5, 1898,) and I failed to confirm his investigations, carried out with the help of Dr. Hewlett a few years ago. As for the fluid draining away from the nose being sterile in these cases, one would naturally expect this to be the case, since of course it is sterile when it leaves the cerebral cavity and surgeons, I think, will agree that there is no better way of making a surface sterile than the continual drip of sterile fluid over it. I trust I may be pardoned for dwelling on this point here, and also for suggesting that if Dr. Thomson will make cultures from the nasal mucosa in normal cases by means of the cotton swab vigorously rubbed against it, instead of a small platinum loop taking a drop from the surface, he will find that a larger proportion of his culture tubes will show bacterial growth than in his former investigations.

As these papers are confessedly only discursive and desultory remarks on the subjects with which they deal I may be permitted to digress here for a moment, from the review of Dr. Thomson's valuable treatise, in order to introduce a notice of the work of Calvino, an Italian observer published several years ago in the *Archivio Italiano di Otologia*, No. 4, 1897. By these experiments the writer believed that he had established it as a fact that in the nasal chambers there resides a bactericidal power which was derived from the epithelium lining these cavities, and not from their secretions. More recently he has published the results of further investigations (*Archivio Italiano di Otologia*, Nos. 2 and 3, 1899,) which, he thinks, support his former work. He proceeded thus: He placed a platinum wire loop full of a pure culture of some well-known bacterium far back on the nasal septum. He then occluded the nostril with cotton. One hour later he took culture from this selected spot. He noted the number of colonies growing on gelatine plates from this culture. Twenty-four and forty-eight hours later he made other cultures and found regularly under proper conditions there were fewer colonies of the bacterium in the latter plates. Hence having in his previous work eliminated the bactericidal power of the nasal mucus, he thinks the epithelium destroys the germs. I have pointed out in my remarks above on Dr. Thomson's book the fallacy of such technique. The constant dripping of mucus from above and the constant waving of the cilia would wash away his plants along the regular route to that "sewer sink" of the nose, the naso-and-oro-pharynx. If he could tell us what becomes of them there he would solve one of the mysteries which stand in the way of our growing knowledge of infection and its pathways, of immunity and its modifications and limitations. In his explanation of the disappearance of the bacteria he had planted on the nasal mucosa, he excludes the action of the mucus on the germs. The method by which he thinks he accomplished this is ingenious if not entirely convincing. He took sections of rabbits' intestines, cleaned them, tied them at one end and after inflating them with air, tied them at the other end. These little air bladders he sterilized in dry heat at 150 C. for ten to twelve hours. Many of course were thus destroyed, but some, he says, were not. By means of a fine syringe he filled these bladders with pure cultures of various micro-organisms, sometimes mixed with nasal mucus, introduced through one of the ends. He again tied that end so that the small sac was again air tight. These bladders he introduced into normal noses; having previously ascertained that osmosis of the nasal mucus into the sacs occurred, he kept them in the

nose for varying lengths of time. He found regularly that the cultures retained their virulence and grew in numbers. Contrasting these results with those previously attained he reasoned that the disappearance of the germs in the first series of experiments, reported in his former paper, was due to the bactericidal reaction of the nasal epithelium. In a few words these are the processes by which Calvino arrived at his conclusions, and although he does not seem to me to have excluded sources of error which completely vitiate them, one cannot but wish that the problem which he attacks with such ingenuity, honesty of purpose, and persistence of endeavor may attract others with like admirable qualities, who may adopt technique more free from error. He obtained practically the same results by experimentation as to the vagina and rectum, which it seems to me strengthens his theory as to the nose very much.

To return to the subject of rhinorrhea, it must be remembered that these cases to which Thomson refers do not include all that may be properly termed such. In fact, when they are studied there is no striking clinical resemblance between them and those cases of rhinorrhea which are dependent on vaso-motor influences and shade off into cases of vaso-motor rhinitis and true hay fever. Many old persons are frequently very much troubled by a serous transudation from the nasal mucosa, especially in cold weather.

It is more properly to these cases of vaso-motor rhinitis that Lermoyez refers (*Annales des Mal. de l' Oreille, etc.*, July, 1899,) under the title of "The Atropo-Strychnine Treatment of Nasal Hydrorrhea." He says that in his cases there has always been some arthritic history and usually some local lesion of the nasal mucosa, and nearly always he has noted the presence of a neurotic element. The local lesion is neither constant nor always of the same nature, and he is more disposed to look upon it as the result rather than as the cause of the neurosis. Nasal hydrorrhea is the analogue in the nose, so he says, of the watery diarrhea from the intestine in the neuroarthritic. He thinks that the origin of the discharge is from the glands, because it contains mucus. I am convinced that the serum comes directly to the surface from the blood vessels as well as from the glands. In fact, the origin is primarily from the blood vessels whether it gets to the surface through the glandular epithelium or through that of the surface layers. A microscopic examination of the mucosa from the upper region of the nose, especially when there is some edema, will nearly always show some nuclei and granular detritus in the layers of the surface epithelium, they having apparently been washed there by the transuding serum. The

same may be observed in the layers of the glandular epithelium. Indeed, in the latter may frequently be seen white cells which apparently have had their origin directly from a capillary which lies in immediate juxtaposition to the glandular acinus. Lermoyez declares that cauterization of one side will frequently stop the discharge from both. Such treatment, of course, whether unilateral or bilateral, can only be efficacious through the vaso-motor shock, but Lermoyez says that local procedures are usually of little value. He prescribes as follows:

℞ Atrop. sulph.....gr. 1/800
Strych. sulph.....gr. 1/30
In syrup of orange; for the first ten days, once a day; then for ten days, twice a day, and then for ten days more, if necessary, three times a day.

His results in forty-two cases were very encouraging, many being entirely relieved after operative procedures had failed.

It is gratifying that a tendency towards the more careful study of accessory sinus disease is to be noted in rhinological literature. It is a melancholy fact that in the growth of rhinology interest in technical details of treatment has ever preceded the careful study of the pathology, etiology, course and prognosis of the affections treated. The novice learns to use a nasal saw before he learns what to saw. It has not infrequently happened that much valuable time and great ingenuity has been wasted in perfecting an intranasal operation which subsequent investigation has proved to be useless or worse. The essay of Dr. Howard A. Lothrop, to which was awarded the Warren prize in 1898, on "The Frontal Sinuses and the Ethmoidal Cells," is an example of the kind of work which in an ideal state of medicine should precede rather than follow surgical attacks on these lurking places of disease. Its careful attention to anatomical description and the magnificent plates which accompany it equal, if they do not surpass, Zuckerkandl's great work in these particulars. The clinical part of the subject, however, is not treated with any fulness. This being America's contribution to the anatomy of the accessory nasal sinuses and various German investigators, Fränkel, Harke, Dmochowski, having reported extensive post-mortem observations, Lapalle, *Archive Internat. de Laryngologie, &c.* No. 3, 1899, in France continues this line of work and publishes an instructive résumé of the conditions noted in the accessory sinuses in 169 cases dying of various diseases, and examined by him post-mortem. In fifty-five, *i. e.*, in one-third of all the cases, he found evidences of inflammation, while more than one-half of those,

who had died of pulmonary disease, had sinus trouble. The maxillary sinus was much the most frequently involved, but the next in frequency was the sphenoidal sinus which was found affected about half as frequently as the maxillary. This agrees with the post-mortem examinations of all other observers with whose work I am familiar. It is evident that we have been too much disposed to look upon sphenoidal sinus disease not only as rare but as of very serious import when it does occur. Bosworth seems to lean to this view of the matter, but to say as does Ferreri *(Archivio Italiano di Otologia, etc.*, 4 fasc., 1898,) *à propos* of a report of a case of sarcoma of the sphenoid, that inflammation in the sphenoidal sinus usually results in death, is to draw on one's imagination, and to shut one's eyes against the information to be derived not only from the autopsy table but from careful clinical study. The symptoms of such trouble are frequently the comparatively insignificant ones of post-nasal catarrh, but it will be found, I think, that the only way to cure these cases is by opening the sphenoidal sinus. There should be no great difficulty or danger in this procedure, and the day will no doubt come when it will be frequently done—possibly too frequently. There is nothing in the history of the therapy of maxillary or mastoid disease to make us doubt, that when it once becomes the craze, the sphenoidal sinus will be opened for every ill suffering humanity is heir to. Nevertheless it at present offers a promising field for legitimate surgical activity. Lichtwitz, in a later number of the *Annales des Mal. de l'Oreille, etc.*, December, 1899, draws attention to Lapalle's statistics, and to those of others regarding this matter, and points out how frequently accessory sinus disease, unrecognized during life, is discovered on autopsy, when the sinuses are opened. He especially calls attention to this fact in relation to the sphenoidal sinus.

In previous communications I have had occasion to cite the work of Cholewa and Cordes, who have advanced the theory that the bone lesion is the primary one in atrophic rhinitis. This is a very plausible, and we may venture to say a very probable, theory, but it lacks any satisfactory proof. A bone lesion is always present in a very old case of atrophic rhinitis, such a one as would naturally be selected for the excision of a piece of bone for microscopic examination; but whether or not the process is present in the beginning and is the first step in the march of the lesion and is the cause of subsequent changes in the mucosa in any given case has not yet been proven, and I can imagine no satisfactory way of establishing that proof however suggestive and acceptable the theory may be.

In a paper in this journal (THE LARYNGOSCOPE, April, 1899,) I have suggested that a primary bone lesion by compressing the veins in the bony canals might in some cases account for the effusion of serum in the tissues, which is the distinguishing pathological phenomenon in nasal polypi. Woakes' idea was, it will be remembered, that the edematous condition (myxomatous he called it) began in the bone. This, I believe, is not the case; a primary bone lesion could hardly be edematous or myxomatous, but it is easily possible that some bone change may, as I have suggested, be one of the causes obstructing venous return and leading to edematous polypi. In a recent number (No. 3, 1900,) of the *Monatschrift für Ohrenheilkunde*, it is apparent that this idea has occurred to Cholewa, in a modified form. He believes that this is the cause of the recurrence of nasal polypi after extirpation, and the inference is the necessity of removing the bone from the surface of which they spring. It may be remembered that Hajek several years ago (*Archiv für Laryngologie*, Band iv, 277,) clearly set forth the nature of this bone change. Cholewa criticises the statements of Heymann in his encyclopedic work just published, that nasal polypi are due to nasal inflammation and that their presence subsequently keeps up the inflammation, thus establishing a vicious circle of cause and effect. I am uncertain how Heymann uses it, but the term inflammation may be applied to all its various manifestations, including suppurative disease of the accessory sinuses. Should such inflammation be the sole cause of nasal polypi it would necessarily follow that the removal of the inflammatory conditions should cure the polypi, and the retrocession of the polypi should put an end to the inflammation, and thus the vicious circle would be broken. Now, as a matter of clinical experience, we know that frequently something very much like this is what happens in certain cases of sinus disease. We open a purulent antrum of Highmore and drain it, and the polypi which existed in the nasal chambers cease to recur after removal; but these are not the only cases in which we see nasal polypi. All the sinuses may be healthy, or at least give rise to no symptoms of purulent discharge and yet polypi not only exist but persist in recurrence after operation. In not a few cases bone disease of the middle turbinated is manifestly present, and I am very much inclined to believe with Cholewa that in these cases the bone disease, which is of course a form of nasal inflammation is the proximate cause of the edematous condition of the mucosa, just as I am ready to believe that sinus disease is not infrequently also the proximate cause of nasal polypi, but neither of these conditions, nor are both together sufficient to

explain the proximate cause of every case of polypi. I am only repeating, what I have in a former number of this journal, April, 1899, stated more at length, when I say that I am firmly convinced that there is a class of cases, frequently associated with asthma and hay fever, in which a pure vaso-motor neurosis is the important factor in the etiology. Now usually, and this should never be forgotten in the discussion of any question of etiology, all these various factors may be at once present in varying degrees of importance. A vaso-motor neurosis of the nasal blood vessels may exist without necessarily an accompanying asthma or hay fever and thus become a factor in the etiology of nasal polypi. As I have attempted to show in the paper referred to (l. c.) I believe that I have seen, and I still have under observation one such case, in which the nasal vaso-motor neurosis is the sole cause of the nasal polypus, without any other apparent cause and without any other apparent manifestation of the neurosis. It is of course understood that such a case is exceedingly rare and the liability to error on the part of the observer as to the etiology is very great, and subsequent events may prove I have been mistaken.

REMOVAL OF SEPTAL SPURS—A NOTE UPON THE USE OF THE CARMALT-JONES SPOKESHAVE.*

BY D. J. GIBB WISHART, M.D., TORONTO, CANADA.

Professor of Laryngology and Rhinology, Trinity Medical College and Ontario Medical College for Women.

For the past two years I have largely abandoned the use of the Bosworth nasal saw in the removal of those projections springing from the nasal septum, which present (a) the appearance of horns, such as occur usually far back in the nasal cavity, are bony in character, and impinge against a small area of the mucous covering of the inferior or middle turbinated surfaces; or (b) the appearance of shelves, usually more anterior in situation, partly cartilaginous and partly bony in character, and in length anywhere from one quarter to one inch, and lying parallel or almost parallel to the floor of the inferior meatus.

I do not include here those spurs whose sides incline towards each other at an angle, obtuse, or only slightly acute; nor again those spurs which are really deflections of the septum, the angle of the said deflection being sharply acute, nor, except in rare instances, any spur associated with a deflection of the septum. These call frequently for the saw operation.

In the classes of cases, A and B, however, the spurs lend themselves readily to the operation which I am about to describe, and after their removal there is left a clean, flat wound, which heals readily. The modus operandi is as follows:

The parts are prepared by spraying with an alkaline and antiseptic solution, preferably nasal plasma solution, followed by the packing around the spur in its entire length of pledgets of aseptic cotton moistened with a solution containing cocaine four per cent, extract of supra-renal capsule ten per cent and trinkresol twelve per cent. Care must be taken that the under and posterior surfaces of the spur be treated as well as those more easily reached. These pledgets are left in position for ten minutes and removed, and if the parts are not sufficiently anesthetised, renewed and replaced.

The patient is seated in the usual position for examination, the head supported firmly against the head-rest by an assistant, and the parts are brought as fully into view as possible. I prefer at this stage to use Palmer's speculum, as it allows of a good view of the

* Read before the Ontario Medical Association, June 7, 1900.

parts with a maximum of room for the handling of the instrument. The surgeon stands in front and to the right of his patient, and inserts the spokeshave with the bevel of the cutting edge always turned towards the septum, passing it gently back over the spur until it drops into the slot, and then pressing the blade as closely as possible up to the septum, by this means engaging the whole of the spur.

If the anesthesia is efficient the above can be done leisurely, and a careful examination made to see that the blade is in place. This being ascertained, the surgeon places the left hand upon the forehead of the patient, and with the right draws the blade rapidly and directly and firmly forwards, with sufficient force to overcome whatever resistance may be afforded by the bone or cartilage, and keeping the blade always parallel with and close to the septum.

The blade must be drawn through with one sweep, otherwise a jagged surface will be left, and when it is disengaged the spur will probably be found adhering to the mucous membrane of the septum by a small strip just in front of its original situation.

This must be snipped with scissors and the spur removed. The parts are then sprayed with an antiseptic and dusted with xeroform, and the cavity filled with a narrow strip of alembroth gauze, dipped in a five per cent solution of camphor-menthol and albolene. Healing results in a few days.

The bleeding is never extensive, owing to the action of the suprarenal extract, the wound is clean cut, and the surface, if anything, flatter than that obtained by the saw.

In the saw operation the hemorrhage frequently obstructs the view, and during the delay thus caused the anesthesia has time to pass off, thus causing a further delay, which is trying to the courage of the patient.

In the introduction of the blade difficulty will arise in two directions—first, in keeping the parts in full view, and, second, in passing it between the outer wall and spur.

To overcome these the parts must be fully illuminated and every endeavor made to keep the blade immediately under the eye of the operator until it is finally placed in position. A thorough knowledge of the position and shape of the spur, and its relations to the outer wall, must be obtained beforehand by the free use of cocaine and a probe, and this accomplished the sense of touch will be a useful guide. The operator may then carefully force the blade over the apex of the obstruction without doing damage to the outer wall, but usually dexterity rather than force is required to insinuate the blade along the winding path.

The narrower the blade the more easily may this be done, but even when the force used has been sufficient to fracture some part of the outer wall, the mucous membrane is not injured and no evil sequelæ resulted.

The instrument used has been that manufactured by Stearns Bros. of London, and with the large square-shaped fenestra. The advantages which I would claim for this method of operation are:

1. The absence of bleeding till the operation is accomplished, with the advantage of non-obstruction to the vision.
2. Great saving of time in operating.
3. The almost entire absence of pain or fear to the patient.
4. The satisfactory course pursued in healing.

47 Grosvenor street.

LARYNGEAL ABRASOR.

BY PROFESSOR GHERARDO FERRERI, ROME, ITALY.

Instructor and Coadjutor to the Oto-Rhino-Laryngeal Clinic of the Royal University in Rome.

The armamentarium of the laryngologist has been so extensively and rapidly increased of late that it should be our purpose to curtail the production of instruments in this field rather than to increase the number.

I hope, nevertheless, that I may be justified in presenting this new laryngeal instrument, for in its practical application it answers the purpose for which it is intended better than any known instrument. It is to be used for the safe and bloodless removal of small tumors, easily detachable false membranes and foreign bodies from the larynx.

We are frequently brought in contact with little patients in the throes of suffocation, where before deciding to open the trachea, we should like to avail ourselves of some instrument which can be easily and promptly introduced into the larynx, and one adapted to the removal of false membrane and small foreign bodies wedged in the lumen of the larynx or trachea, also for the removal of neoplasms which threaten stenosis.

Not only among children do we meet with these numerous difficulties in the examination and treatment of the upper respiratory tract, especially the larynx, but there are frequently cases which present great intolerance to any attempt at laryngoscopic examination, obstructions in the fauces, tissue overgrowth at the base of the tongue, such as hypertrophy of the lingual tonsil, interfering with the raising of the epiglottis, and other similar conditions in which a clear laryngoscopic examination and necessarily also an endo-laryngeal operation by proper illumination is almost impossible. In such conditions the laryngologist may be suddenly called upon to save a patient from impending suffocation, and before deciding on an external operation, he may desire to avail himself of a proper instrument to introduce into the larynx with which he may bloodlessly remove the obstructing agent.

To meet these emergencies I have devised an apparatus of simple manipulation, which on several occasions I have found extremely useful in cases such as these above cited.

The instrument consists of a long tubular laryngeal shaft with regulation curvature, containing at its distal end an olive-shaped

bulb; the proximal end fits into a specially constructed handle. The tube which carries the olive-shaped bulb is hollow to admit of an inner rod, which by the manipulation of the lever at the handle admits of traction and extension. Attached to the distal end of this shaft are five small fan-like blades, which, when the instrument is closed, are contained within the hollow olive-shaped bulb.

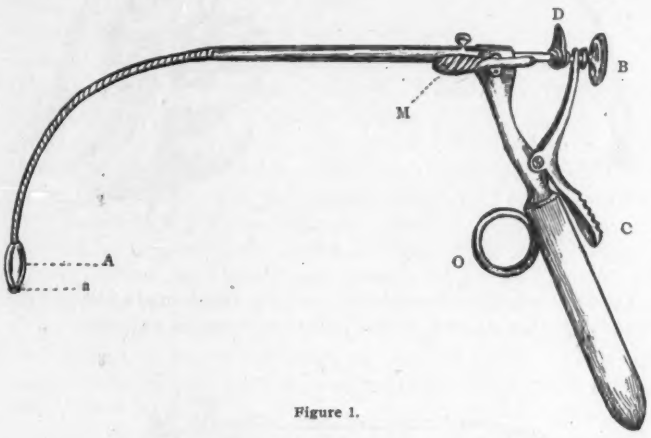


Figure 1.

The instrument must be considered in three aspects: closed, open, and ready for use. When the apparatus is closed, as in Figure 1, the olive-shaped extremity is shown composed of two parts, viz., the olive, *A*, and a small button, *a*; to the other end of the shaft is a milled screw, *B;* a lever, *C;* a check screw, *D;* a spring, *M*, and a finger-ring, *O*. In this position the instrument is introduced into the larynx.

Pressing forward the milled screw, *B* (as shown in Fig. 2), the button, *a*, is projected forward, thus liberating the series of five fan-like metallic blades contained within the hollow olive bulb. Then by pressing down the lever, *C* (as shown in Fig. 3), the terminal button, *a*, is drawn back to the olive, *A*, thus separating the metallic blades, *V*, and holding them apart as the petals of a flower.

The manipulations, as described in Figs. 2 and 3, are conducted after the instrument has been introduced into the larynx below the obstructing agent, and now by withdrawing the instrument from the

larynx with the fan-like series of blades still extended it may be readily seen that any foreign body obstructing the lumen of the glottis, if not adhering too closely to the walls, will be removed.

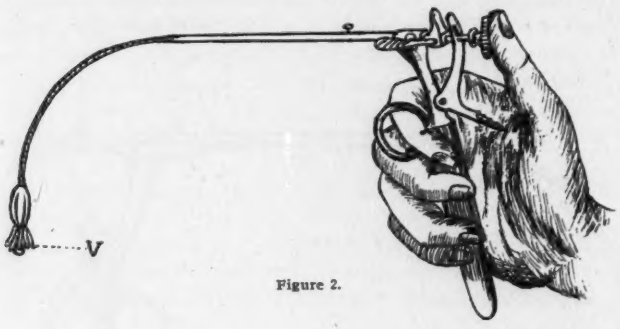


Figure 2.

For false croupous membranes and for papillomata obstructing the larynx, this instrument has proven superior to any other.

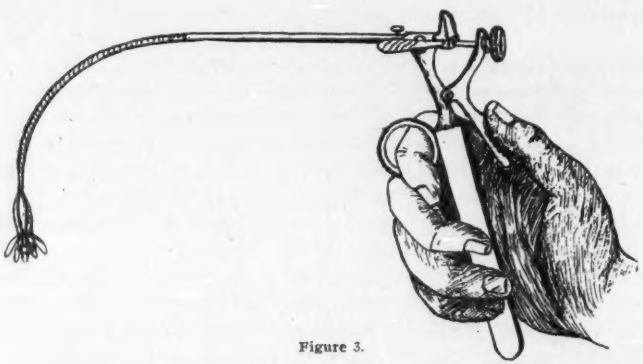


Figure 3.

Another valuable feature of the instrument is that it may be easily taken apart and can be readily sterilized.

It is made by Carfani & Salvini, 103 Corso Vittorio Emanuele, Rome.

SYMMETRICAL OSTEOMA OF THE NOSE WITH REPORT OF A CASE.

BY OTTO J. STEIN, M.D., CHICAGO, ILL.

Professor of Diseases of the Nose and Throat. Post-Graduate Medical School and Hospital, Chicago.

Bony tumors of sufficient size to occlude the nostril are rare enough, comparatively speaking, to be of more than ordinary interest to the rhinologist. However, when we have two such growths invading both nostrils independently, then we have a condition that is really unique and curious. Careful search of the literature discloses very little indeed relative to this bilateral condition. It is true every authority on surgery recognizes osteoma of the cranial bones as occurring multiple. Also their involvement of, or origin in, the various cavities of the head. We also hear of and see cases where such a tumor has grown from one side and invaded the nasal sinuses of both sides. But of a symmetrical growth of the bones of the face, which at the same time involve the cavities of the nose, scarcely any reports can be found. The condition when seen is too evident not to be recognized, and therefore I reason that the meagerness of the literature on the subject can only be attributed to its great rarity. Paul Heymann, in his new "Handbuch der Laryngologie und Rhinologie," says: "Osteoma of the nose and its sinuses are exceptionally rare." He himself has not seen one case. Bornhaupt, in his careful research of the literature up to 1880, found in all only fifty cases, of which twenty-three cases were in the frontal sinus, twelve in the ethmoid cells, ten in the antrum and five in the sphenoid sinus. Osteoma of the orbital cavity, if anything, is common, and does not, as an individual pathological condition, enter into the consideration of this paper. Christian Fenger, of Chicago, before the surgical section of the thirty-eighth American Medical Association meeting (May, 1887) read a paper on "Living and Dead Osteomas of the Nasal and its Accessory Cavities." Reporting in connection a case of encysted orbital osteoma originating in the ethmoid bone, wherein four cavities were invaded, namely, the right nostril, orbit, frontal sinus and antrum. Fred Krammer, of New York, in *Annals of Surgery* for 1889, reports a case of osteoma of the right nostril, also invading, like in Fenger's case, the orbit and frontal sinus. C. G.

Coakley presented to the New York Academy of Medicine, December 26, 1894, a case of osteoma, of which he says: "Both nostrils were occluded by a hard growth springing from the inferior turbinal tissue." Whether this was a symmetrical condition or one growing from one side only and involving both cavities, the report does not make clear. My inferences are that the conditions on either side were not independent. Carl Seiler, of Scranton, Pa., in an article in the *International Journal of Surgery* for November, 1899, reports a case of "Apparent Congenital Eburnification of the Superior Maxillary." Here, like in Coakley's case, both nostrils were occluded. The left antrum was obliterated and the floor of the orbit on the same side encroached upon. But Seiler is specific in saying that the growth sprang from the left superior sinus process (meaning nasal process, presumably) of the maxillary bone. Jonathan Hutchinson, in his "Illustrations of Clinical Surgery," Vol. I, 1878, describes two cases occurring in his practice, which he designates as "symmetrical osteoma of the upper maxilla," in which both nostrils are occluded by bony tumors growing by broad bases from the nasal processes of the upper maxilla. The description of these two cases is the only one that bears resemblance to the case I will report as being one of symmetrical osteoma involving and occluding both nostrils. In fact the picture illustrating one of Hutchinson's cases is an exact counterpart of my case. The external deformity, as seen in the cases of Hutchinson and myself, has been observed and described both by Professor Alexander Macalister, of Cambridge, England, before the Royal Irish Academy, December 11, 1882, and by Dr. J. J. Lamprey, of England, in the *British Medical Journal*, December 10, 1887, as cases of "horned men." Lamprey, during his residence in South Africa in 1877, saw three black men all presenting symmetrical growths along the "infra-orbital ridge, over which the skin was freely movable and not in any way involved," and neither were the nostrils obstructed. Before entering into the etiology and pathology of this condition, I will but briefly describe the case I have to report. Patient, William Eagan, twenty-eight years of age, the surviving member of a family of six, all of whom, mother, father, one sister and two brothers, died of consumption. Had enjoyed very fair health up to about three years ago, when the ravages of consumption made rapid progress upon him. Twelve years ago claims to have received an injury to the larynx by falling on a projecting piece of wood. From that time on, he says he has spoken in a hoarse, loud whisper. About eleven years ago, while engaged in a

fistic contest, received a severe blow upon the nose, which was followed by a gradual enlargement over the lateral region of the nasal bones, continually growing in size without any pain or discomfort up to about four years ago. Since which time the condition seems to have remained stationary and the same. The patient, in applying to me for treatment, did not come on account of his nose, but for his hoarseness, nor has he at any time since the existence of his nasal trouble ever sought or been under treatment for the same. Hence, the only subjective symptoms in this case, nasal obstruction and anosmia, have, *per se*, been so gradual and uncomplicated in their appearance as not to inconvenience the patient sufficiently to apply for any relief.

Objectively we are foremostly impressed by the facial deformity presented by the patient, a classical "frog face" is to be seen. A symmetrically placed swelling, half the size of a large bird's egg, on either side of the nose between the lower and inner margin of the orbital cavities and the upper half of the dorsum of the nose, and the hanging lower jaw of the mouth-breather, combine to make up the frog-like appearance of the face. External palpation of the growth defines a tumor of bony firmness, sharp in outlines, with the overlying skin normal and freely movable. The right side is slightly larger than the left. The orbital cavities are but slightly encroached upon from below. The right nasal duct is obstructed by the growth, the left one encroached upon. On anterior rhinos-

copy we find the right nostril totally occluded, the left one almost so, by the protrusion of their outer walls into the cavities. This protrusion, occluding mass, which is firm and hard on palpation and offers resistance to the passage of a sharp instrument, occupies the position of the nasal wall of the antrum. On both sides it has grown up to and presses against the septum, so that the finest wire cannot be passed between the two; at the same time the pressure has not caused any ulceration or absorption of the septum. On the left side there is a depression seen on the surface of the growth corresponding to the situation of the middle nasal fossa. Above and around the growth on this side, about opposite the situation of the middle turbinal there is a small opening, admitting a fine probe and through which the patient can respire and even blow mucus. The mucous membrane covering these tumors is pale in color and thin, but not eroded or ulcerated and not secreting any noxious secretions. On posterior rhinoscopy the vault of the pharynx as well as the posterior nares are free from any obstruction or marked catarrhal trouble. On transillumination through the mouth, the antri show no transfusion of light, both alike offering obstruction to the passage of the light rays. The palate is highly arched and the mucous membrane of the pharynx the seat of a chronic catarrhal inflammation, the result of his mouth breathing. The examination of the eyes, as made by Dr. R. S. Pattillo, shows the right one normal with a vision of $^{20}/_{30}$ in both. The left eye shows an inability to rotate inward, divergence outward two lines, pupil widely dilated, fixed, not responding either to light or accommodation; fundus normal.

Osteoma consists of a mass of bony outgrowth of ovoid shape, but often modified by the resistance offered in growing. As a rule they are benign in character, of slow growth and at times appear multiple. Its nature is determined from the tissue from which it springs as to whether it is of the hard or soft kind. Very often they are composed of both kinds.

Senn defines osteoma as "a tumor which possesses a structure resembling that of cancellous or compact bone, produced from a congenital or post-natal matrix of osteoblasts." As to the origin of osteoma, we distinguish two main divisions: (1) The heteroplastic and (2) the hyperplastic. To the first division belong all those which arise from the soft tissues of the body, as seen in the brain membranes, eye, lung and skin. The hyperplastic kind includes all the rest. If the hyperostoses arises from the periosteum it is known as the external variety. If from the medullary portion

it is called internal variety. If it is diffuse in character we have what is called hypertrophy; seen at times over the entire skull, resulting from rickets, syphilis or some disturbance in circulation, and known as Leontiasis Ossea. When the process is defined and of the external variety we have what is called exostoses, and if of the internal variety they are known as enostoses. The greater number of exostoses arise from the periosteum. In the soft or spongy kind we may have a capsule of compact bone, while in the hard or ivory kind there may be a nucleus of soft bone. The spongy kind is more numerous than the ivory, their compact bony capsule is of varying thickness, and the surface of this variety, as a rule, shows no wart-like irregularities. Osteoma of the nose have a covering of Schneiderian membrane, which at places is very thin from pressure. Their starting point varies. At times from any of the nasal sinuses, from the vomer or the lachrymal bone. In some cases they are connected with the mother tissue by a pedicle of spongy bone, in other cases their pedicle is made up of connective tissue and mucous membrane, and, again, in other and more numerous cases, the tumor lies free and unconnected. This latter seems to be true the older the growth is, or, as often has been the case, where the growth has been subjected to a blow or injury, it thus becoming detached from the mother tissue. In some rare cases two pedicles were found to exist. They usually have their beginning in young life. Of Bornhaupt's fifty cases, eighty-seven per cent occurred before the thirtieth year. They are of very slow growth, but positive in their progress, letting nothing stand in their way, but pushing through the firmest kind of resistance. Their size varies between that of a walnut and a goose egg. Smaller ones, the size of a pea, are more often found on the cadaver, having caused during life probably no particular disturbance. Bruns reports one removed weighing sixty grams. Spillman reports one weighing 120 grams and the size of a fist. Lenoir (Soc. d'Chir. de Paris, p. 468, 1856) found two separate osteoma in one nostril. Exceptionally large ones, like in the case of Hilton (Guy's Hospital Reports, Vol. I, 1836) where the growth, after twenty-three years, and having invaded the antrum, grew to weigh 440 grams, and having a length of eleven inches, are, of course, of seldom occurrence. The symptoms are not characteristic. At first an uncontrollable desire to rub the nose is described by some authors. Epistaxis and purulent discharges are mentioned by others. Later some patients complain of a feeling of fullness and sense of foreign body in the nostril, and at times pain, interference

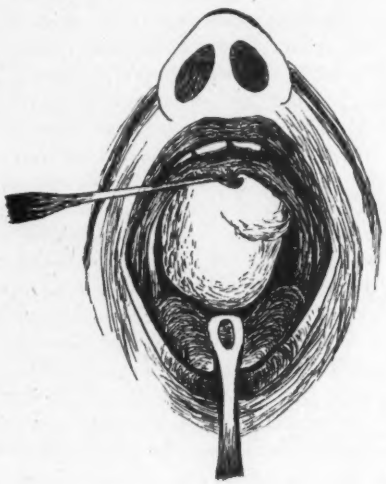
in respiration and the suspension of the olfactory sense. Still later signs of deformity about the nose and face begin to show. Pressure symptoms like those of exophthalmus and epiphora may appear. Diplopia may be present. Often pressure necrosis results. The differentiation between the ivory and the spongy varieties is difficult on account of the variations in composition. Dolbean (Academy de Med. de Paris, 1866) believes the sense of feeling determines an elasticity in the spongy bone not found in the ivory variety. Richet (Academy de Med. de Paris, 1871) claims that the crackling sound produced by compression determines the spongy kind. The prognosis can be determined from what had been said. Where the growth is regarded as a manifestation of syphilis, as in Coakley's case, the iodides and mercury seem to cause their disappearance. Fenger says the encysted osteoma has no connection with syphilis and hence is not benefited by such treatment. Operation in reality offers the best possible relief. Those tumors, growing from the frontal sinus, are considered the most dangerous on account of their nearness to the cranial cavity. Of Bornhaupt's twenty-three cases, growing from the frontal sinus, eleven opened into the cranial cavity. To facilitate removal by operation the pedicle must always be sought for. Attempts at removal by penetrating the mass will prove the most difficult and often impossible task, for the ivory nature of many of these growths will deflect the sharpest chisel and defy the strongest drill or trephine.

REPORT OF A CASE OF REMOVAL OF A MIXO-FIBROMA FROM THE NASO-PHARYNX.*

BY HAL FOSTER, A.B., M.D., KANSAS CITY, MO.

The patient was a German farmer, aged thirty-eight years. Most of his life has been spent in Iowa and Kansas. Five years ago he had a very severe nasal hemorrhage which came near proving fatal.

Last November the patient presented himself to me, complaining of nasal stenosis on both sides. The voice was affected and he was obliged to breathe with his mouth opened. There were blood vessels on the surface of the growth which indicated that profuse bleeding might occur on the slightest manipulation.



I presented this patient before the Kansas City Academy of Medicine. He was sent to St. Margaret's Hospital and placed on tonics for several weeks. One week before the operation a daily spray of extract supra-renal capsule was used. The growth was so very

* Read before the Western Opthalmological and Oto-Laryngological Association, Fifth Annual Meeting, St. Louis, Mo., April 6, 1900.

large that it could easily be seen. I decided to use the cold snare in removing this tumor. It was decided to use cocaine anesthesia. After its use a four per cent solution of supra-renal capsule was applied on cotton applicators. A strong cold wire snare was now used rapidly and the growth was removed.

Immediately after its removal the supra-renal capsule spray was used and the patient was put to bed. In spite of every precaution the bleeding was somewhat profuse, but not enough to do any harm.

The above-named treatment was continued for several days. The patient made a rapid recovery. In removing these tumors one cannot be too careful to prevent the loss of blood. The operation of transfusion should be resorted to in cases of extreme loss of blood.

The tumor was diagnosed a mixo-fibroma by a microscopical examination.

I desire to express my thanks to Drs. Murphy and McCall and several students for kindly assisting me in this operation.

REPORT OF CASE OF FIBROMA INVOLVING THE TYMPANIC CAVITY.

BY E. W. FLEMING, M.D., LOS ANGELES, CAL.

Fibromata developed in the most diverse parts of the body are extremely common; cases, however, of fibroid tumor involving the middle ear are sufficiently rare to deserve record.

A patient, a male, forty years of age, and in rather poor general condition, consulted me July 27, 1899, for an affection of the left ear of recent date. About one month previously he noticed a sensation of fullness in the left ear which became more intense each day. This was the first intimation that he recived that his ear was not perfectly sound in all respects. In the course of a few days a slight discharge of pus was noticed and a rather solid fleshy mass could be felt with the finger near the outer orifice. The progress of the growth was very rapid, filling the auditory canal and extending outward to the plane of the cartilaginous meatus in about twelve days from the time it was discovered by the patient. On examination I found a fairly solid tumor-like mass growing outward from the depths of the external auditory canal and almost filling the concha. The visible portion of the tumor was about the size of a small walnut, coarsely lobulated and dark red in color. Blood vessels coursing near the surface gave evidence of its extremely rich vascular supply. The tumor was only slightly movable and highly sensitive to deep manipulation with the probe. It was so tightly wedged into the lumen of the canal that it was impossible to make out the exact point of origin, save that the posterior superior wall of the bony canal was at least one point of fixation. There was well-marked deafness on the affected side. Watch on contact. Rinne, negative—Weber heard to the left—mastoid normal—cervical glands not enlarged. The right ear was normal. I advised that a section of the growth be removed for microscopical examination. Accordingly cocaine and suprarenal extract solutions were alternately applied and a large section of the growth removed by means of the cold-wire snare. A copious hemorrhage followed which was stopped with a compact tampon of iodoform gauze. The specimen was submitted to Dr. Stanley Black for microscopic examination. He pronounced the growth a true fibroma. Patient was advised to go to the hospital and submit to a radical operation, but declined to do so.

During the following six weeks the treatment of the growth was limited to the employment of the cold-wire snare, by means of which fragments of the growth were removed, and the application of the galvano-cautery. This very materially reduced the size of the growth, leaving the cartilaginous portion of the canal free. It was now clearly evident, however, that the growth extended beyond the depths of the bony canal. Owing to the depressed and nervous state of the patient he was given a two-weeks' rest from all treatment. Following this, examination showed that there had been a rapid recurrence, the tumor being almost as large as when first seen.

Operation at the California Hospital was undertaken on October 2d, with the assistance of Dr. W. W. Beckett and Dr. F. D. Bullard. Owing to the size of the growth and to gain more ready access to the deeper parts, an incision was made over the mastoid, parallel to the insertion of the auricle, together with a forward dissection of the integuments from the underlying periosteum and division of the fibro-cartilaginous tube. This detached the auricle and cartilaginous meatus posteriorly and gave direct access to the osseous portion of the external auditory canal. It was now clearly seen that the growth filled the tympanic cavity and was attached to it as well as to the posterior wall of the bony canal. There was no evidence of the drum membrane. The mass was surrounded with a loop of number five piano wire and deliberately excised. The base, which apparently occupied the posterior aspect of the tympanum, carefully scraped and a thermo-cautery cautiously applied over the bleeding surfaces. The operation was concluded by lightly packing the meatus, the periosteum replaced and retained by absorbent sutures —the auricle stitched into position and an aseptic dressing applied over the ear and mastoid. Five days after the operation the dressings were removed, when it was found that primary union had taken place in the upper part of the wound over the mastoid and the auricle properly in place. There was no visible evidence of obstruction, either in the auditory canal or middle ear, and only a slight mucopurulent discharge. For about two weeks matters seemed to progress very well when granulation tissue rapidly developed, and, notwithstanding successive cauterizations and other measures, according to the rules of general surgery, steadily encroached on the lumen of the deep canal. A curettment was done under chloroform and the parts once more rendered free and open. This was the finish of my direct connection with the case, for the patient very soon after developed acute articular rheumatism with high fever, which completely prostrated him for over six weeks. An incident of his illness

was the development of a large abscess located on a level with and to the left of the tip of the coccix.

January 16, 1900, at the request of the attending physician I visited the patient at the Christian Hospital. The ear was examined and the following notes were made: "With the exception of a small sinus, through which issues stringy muco-pus, the external auditory canal is closed. The obstructing tissue appears to be fairly organized, granulation tissue having none of the characteristics of the original growth. Small pouting granulations at the orifice of the sinus. Patient is now gaining strength rapidly and says he has at no time experienced any ear pain or other head symptoms."

February 27th, just seven months from the time I first saw him, patient presented himself at my office. He said he felt better and weighed more than he had for several years. The condition of the ear was the same as when seen six weeks previously. Further local treatment was advised, but patient declined to have anything done for the present.

The gross appearance of the structure of the growth at the time of its removal by operation was such as to excite a suspicion that it might be malignant. The previous microscopical examination, however, together with the fact of some seven months having elapsed without evidence of active malignancy and the decided improvement in general bodily health—argues against malignancy. The growth was strongly attached to the walls of the tympanic cavity and bony canal and I am not prepared to say from which it primarily occurred.

The special points of interest in this case appear to be—First, the nature of the tumor; second, its extreme vascularity and rapid growth after partial removal, pointing alike to possible malignancy, and third, its unusual location.

Extensive sacrifice of the tissues lining the bony canal in any case inevitably leads to cicatricial contraction more or less occlusive. Persevering after-treatment especially with the assistance of skin grafts may limit this to a minimum in a way in which circumstances prevented in the case detailed.

A TICK IN A MAN'S EAR FOR TWO YEARS.

BY B. F. CHURCH, M.D., LOS ANGELES, CAL.

A stockman of robust constitution applied for treatment with the following history:

Beginning two years ago, felt severe pain in right ear at intervals, as if, as he expressed it, something was clawing or scratching in his ear, and at times was deaf, which would suddenly pass away. Pain was not continuous, intervals of a month's duration would pass without disturbance in ear. For several months after being first affected he would pick out what seemed to be blood clots mixed with cerumen. After that he frequently removed hard lumps from ear. Sharp, darting pains in ear frequently annoyed the patient. Three or four days before I saw him pain became continuous in ear, also over mastoid region, and a feeling of numbness over that side of face. Examination showed the canal occluded with dried epithelial scales and wax.

After some difficulty this mass was syringed and picked away until presumably the drumhead could be seen. Upon close inspection movements of several small bodies were seen having the appearance of worms or slender maggots perforating a bulging drumhead. By firm traction upon one of them with forceps the mass was loosened, and upon removal was found to be a large live tick which had been snugly embedded in a sulcus against the drumhead, entirely closing the canal. The lower segment of the drum was eroded but not perforated, the remaining portion of the drumhead and canal greatly congested. Having returned to nearly normal after emptying the canal, and pain and all discomfort passed off by the following day.

Judging from the amount and condition of the hardened cerumen blocking up the canal from the meatus to the foreign body it is not unlikely that the patient's history of the length of time (two years) the tick remained in the ear is correct, making the case a peculiar one, in that the patient would have tolerated the pain and annoyance for that length of time before seeking relief, especially that he refrained from using the usual household remedy, sweet oil, which would have killed the insect. Also, the longevity of the tick, as it is generally believed that after filling themselves with blood (the female only being capable of much distension) from their host, drop off after a few weeks or months and die.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

Stated Meeting, April 25, 1900.

Wendell C. Phillips, M.D., Chairman.

A New Galvano-Cautery Device for Controlling the Edison Current Without the Use of a Motor.

Dr. Wendell C. Phillips said that the motor transformers had many serious objections, especially the expense and the noise. It was only during the past few weeks that he had seen a controller for the continuous current which fulfilled his expectations in this regard. The apparatus he was about to exhibit, so far as he had tested it, worked very well. The principle involved was the well known action of the current on a small column of liquid, and hence the name "The Improved Liquid Interruptor." The interruptions are at about the rate of 10,000 per minute. By means of this apparatus any sized cautery electrode can be heated and the current is easily adaptable to the head light and to the transillumination lamps.* The manufacturer states that the instrument can be run continually for half an hour, and will then recuperate after about five minutes' rest. It is comparatively inexpensive. The instrument cannot be used with the alternating current.

Diseases of the Antrum of Highmore.

Dr. Emil Mayer presented two antrum cases. One of them was a woman of thirty-five, who had been well up to last December, at which time she had suffered from an acute attack of rhinitis with unilateral headache and discharge. On February 20th she had come to him with a bad discharge from the left nostril. He had operated upon her, opening the canine fossa, making an incision first from the malar ridge to the median line of the face down to the periosteum. He had then raised the periosteum, and with a chisel had made a very small opening and enlarged that with a hand gouge. He avoided the use of the burr because he thought much unnecessary suffering was imposed upon the patient by spiculæ of bone left in

* It consumes no more current than the general run of motor transformers.

the antrum after the use of the burr. The opening made would easily admit the tip of the little finger. Then, with a curved chisel he had broken down the wall of the antrum from the nasal side, and entered the cavity. A probe was run through, and by attaching a string to it a fenestrated tube was placed in position. The second case shown was that of a girl of eighteen who had had pain over the head and mastoid for about three years. He had operated upon her on November 4th, making an opening into the canine fossa. This had been kept open for six weeks. Two months later she had returned with another accumulation of pus, so on March 2d he had reopened the old wound and breaking down the nasal wall inserting a perforated tube had established through drainage. He now intended to leave it open so long as there was a discharge of pus.

Abscess of Frontal Sinus—Operation—Recovery.

Dr. Mayer also exhibited a patient upon whom he had successfully operated for disease of the frontal sinus. This patient had been treated previously for some nasal affection and liberal applications of the galvano-cautery had been made to his nose. When first seen by the speaker his sufferings were intense; he had not slept for nearly a week, he had chills and a temperature of 101.5°. Pus could be seen in both nasal fossæ, there was exquisite tenderness over the left frontal sinus and quite a deal of pain over the right maxillary antrum. On January 9th he operated in the presence of Dr. Asch, Dr. Ives, and several members of the class, on the frontal sinus, making an external incision and taking out a plate of bone of about eight millimeters in width. Pus flowed very freely. With a blunt instrument the vestibule of the nose was broken down, after curettement and thorough cleansing of the cavity. A fenestrated tube was then introduced, one end of which protruded above the incision and the other through the nose. There was an uninterrupted recovery and in six weeks' time the tube was entirely removed. An examination now shows a very small scar and within the nose the vestibule can be plainly seen.

This case illustrates another point of interest and that is that while there was undoubted antral disease on the opposite side nothing was done to relieve that, the operator being content with the first operation for the time being. Slowly all evidence of trouble receded until now there was an apparently normal condition.

Dr. Jonathan Wright said that the chief advantage of this operation is the continuance of the opening after the removal of the tube, and Dr. Mayer's cases had not had time to demonstrate this advantage.

Personally, he had about come to the conclusion that when these cases do not recover after thorough exploration and drainage, they really originate in the ethmoid cells or elsewhere, and affect the antrum secondarily. He had several times seen cases in which he felt sure the antral trouble had been secondary.

Dr. T. R. Chambers asked what was the solution employed for cleansing the frontal sinus. He had found that when there was a purulent discharge containing the Fraenkel pneumococcus it was acted upon by pepsin. He had had under his care a lady who had been made quite comfortable by irrigations with a modification of pepsin.

Dr. R. C. Myles said that this antrum operation through the naso-antral wall, as performed by Dr. Mayer, promised good results. He had been making openings one inch long and one half inch wide, and they frequently closed by membranous formation. He had had recurrences in several of the frontal sinus cases after external operation, because he had not made a sufficiently large opening into the nose. He had also removed the anterior end of the middle turbinal in these cases. In some persons the nasal process of the superior maxillary bone was so close to the cranial cavity that it was difficult to chisel away enough to secure an aperture of the proper size. Cases that had lasted less than six months yielded the best results from chiseling rather sparingly; those of very long standing demand a large opening.

Dr. Mayer said that the treatment of frontal sinus cases was at present in an experimental stage. Although the opening might close it would never be in the firm condition of the original bony wall. He had used for cleansing purposes a 1 to 10,000 bichloride solution; he had not used enzymol here, but in certain catarrhal cases he had done so, and with the greatest satisfaction.

Dr. Francis J. Quinlan exhibited a man who had

Extensive Unilateral Edema of the Arytenoid Cartilage on the Right Half of Larynx, with much Tumefaction of the same Side.

There was reason to believe that the case might be tubercular, although examination of the secretions had thus far been absolutely negative. The man had suffered for the past year from dysphagia and some dysphonia. He had thought the case might be a mixed lesion, viz., tuberculous and malignant. One should be especially careful about making the diagnosis in this class of cases, where the infiltration is of an unilateral character—in the one referred to there was no subjective symptoms.

Surgical Treatment of the External Deformities of the Nose, Illustrated by Cases, Models, Etc.

Dr. D. H. Goodwillie read this paper. He said that the functional activity of the lungs could not be properly performed unless there was normal nasal respiration. Some of the causes of external deformities of the nose are: (1) Congenital; (2) traumatic injuries, directly and indirectly causing pathological changes; (3) hypertrophies and tumors of the hard and soft tissues, both intranasal and extranasal; malignant, specific and other constitutional diseases.

Case I. *Closure of an Opening in the Bridge of the Nose after the Removal of a Metal Bridge.*—The bridge had been introduced in 1892, and he had seen the patient for the first time in February, 1896. The metal frame can be seen through an opening an inch long in the bridge. There was little or no respiration through the nostrils. The upper lip and nose were separated from their attachments to the bone, and the metal frame was dissected away. Two operations were performed for the closure of the opening in the bridge. A section of tissue was removed from the end of the nose to cover the opening in the bridge. To increase the blood supply of the part the temperature was kept at 100° F. for forty-eight hours. Anesthesia with ether and chloroform had been kept up by means of the author's ingenious apparatus. He was of the opinion that no matter how skillfully inserted these metal frames are not desirable, and are apt to end ultimately in failure.

Case II. The patient, a girl of five years, when seen in 1878, was brought to him because the bridge and end of the nose were depressed, giving the appearance of a colored girl's nose. At the outset a plaster mask was made, and this was used in making a nasal splint for the subsequent treatment. An intranasal splint was employed to elevate the nose and add to the length of the columnæ nasi.

Case III. *Traumatic Injury of the Nose.*—Seen in May, 1883. The cartilaginous septum was separated from the bridge of the nose and from the columnæ nasi. The small portion of the septum protruding from the nostril was amputated, and then the contour of the nose was restored with the exception of the exostosis of the bridge. An appropriate extra and intra-nasal splint, made from a cast, was then applied. By this splint the contour of the nose and the position of the septum were maintained, and proper nasal respiration was thereby secured.

Case IV. *Sebaceous Tumors of the Nose.*—These growths were so large that they reached down to the chin. There was no intranasal obstruction.

Case V. *Deformity of the Nose from Syphilis.*

Case VI. *Nasal Deformity from Scarlet Fever.*—The patient, eighteen years of age, had had scarlet fever at six years of age. This had produced severe nasal disease and trouble with the right tear duct. The right nostril was closed by hypertrophied bone, the left by deviation of the septum and hypertrophy of the soft tissues.

Case VII. *Nasal Deformity from Thumb Sucking.*—The child had sucked its thumb, and at the same time had grasped the end of the nose with the index finger and middle finger. This had deformed the nose and seriously interfered with nasal respiration and with the general health.

Several other models were shown.

Dr. Goodwillie said that in all cases of deformity he takes a cast of the whole face for study and guidance. In this plaster reverse he makes a plaster cast. He then makes another one in wax, and on the wax he restores the proper position of the parts. With this as a basis he makes a splint which passes over the brow and down over the nose. When it is desired to support the septum, an intranasal splint is attached to the outer nasal splint by means of a spring with an adjusting screw. The object of this spring is to prevent undue pressure and interference with the circulation of the parts. The upper part of the external splint is held firmly by a band passing around the forehead and head.

Dr. J. O. Tansley said that from listening to such a paper one could hardly appreciate the amount of energy and enthusiasm and ingenuity that Dr. Goodwillie had thrown into this work any more than one could fully appreciate how remarkable and brilliant were his results.

Dr. Jonathan Wright said that Dr. Roe's operations were certainly wonderful, but few besides himself seemed able to perform them with success. He therefore fully appreciated very highly the suggestion to saw through the bones as done by Dr. Goodwillie.

Dr. Mayer asked if Dr. Goodwillie found that the presence of the rubber tubing was specially annoying to the patient. His own experience had been decidedly unfavorable to the use of the rubber, and that had led him to the making of vulcanite tubes. The patients had complained very much of the pressure of the rubber and of the irritation produced by it.

Dr. F. J. Quinlan said that Dr. Goodwillie was probably the pioneer in this country in rhinal and oral surgery, and the difficulties that he had surmounted in the days before we had cocaine and suprarenal extract could only be *imagined* by those of the present day. Regarding the nasal tube, he would say that the soft rubber tube had proved to be an excellent means of correcting deformities of the cartilaginous septum and was used to-day in preference to many of the more recent appliances that were devised for the correction of these irregularities.

Dr. M. D. Lederman spoke of the cases of occlusion and adhesions sometimes met with. In such two or even three operations might not be sufficient to accomplish the desired purpose. Reference was made to a case in which a young man had a membranous occlusion in the anterior portion of the nose. There was a very small opening and a membranous band on the left nasal vestibule. He had been operated upon twice before. The speaker said that this man had been made to wear a silver tube for a month because its removal, done tentatively before that, had shown a tendency to closure of the opening.

Dr. Myles said that Dr. Goodwillie had presented some very useful things to the profession. His name was connected with the saw, the trephine and the tube. His ideas had been appropriated by many operators, often without due credit.

Dr. J. F. McKernon said that from 1892 to 1894 he had seen five syphilitic cases operated upon, the Martin bridge being used. A modification of it had been used in two of the speaker's cases, the arms being considerably longer, and the resting piece over the nasal bones shorter. One of his patients, a man, had done pretty well for about a year, and then there had been sloughing. A woman of thirty-five was another patient, and her syphilis had practically run its course. In her he had used a very short, flat-curved covering over the nasal bones, the arms being particularly long, and passing down into the superior maxillary bone. When seen at the end of eighteen months the bridge was in position, there had been no sloughing, and the cavities on either side were practically patent. He had seen her again in February of the present year. There had then been no external manifestation of the presence of the bridge, and during all these six years it had given no trouble. This success was largely owing to the accurate fitting of the bridge to the bone and to the cure of the quinsy disease from which the patient had suffered.

Dr. Goodwillie said regarding the bridge operation, that the cutting through the bridge seemed to him a particularly satisfactory operation. He made a trephine opening through the nasal bones, and then with the saw cut as far as seemed desirable, and brought the nose into line. He had not had any difficulty in securing union. When the rubber tube is used at first in the nose there is considerable catarrh, and more or less irritation, but by repeated cleansing with strong peroxide of hydrogen a tolerance will be established. The rubber tube had not been intended to use in connection with bone except where the latter had been divided and it was desired to keep it in place.

THE LARYNGOLOGICAL SOCIETY OF LONDON.

Fifty-Sixth Ordinary Meeting, March 3, 1900.

(Continued from page 367.)

Specimen of Bony Spur from Ethmoid.

Shown by Mr. Richard Lake. This specimen is the bony end of a septal ridge; as will be seen, the whole thickening of the vomer was removed. The apex of the exostosis, as it practically is, was firmly adherent to the middle turbinate bone, and in breaking through this adhesion I drove the sharp end of the severed base through the septum. The result was a perforation of the septum, which is of no importance to the patient, who does not know of its existence.

Case of Suppurative Cyst of Turbinal Bone.

Shown by Dr. Henry A. Davis. The patient, a woman æt. forty, complained of a lump in the nose of three months' duration. On examination there appeared to be a large hypertrophy of the left inferior turbinal, which diminished slightly under cocaine. In spite of treatment, the swelling increased till almost complete nasal obstruction on the left side ensued. The swelling was red, dense, and painful.

The mucous membrane was incised with a bistoury, and about two drachms of thick pus escaped. On passing a probe into the cavity, bone was felt in all directions.

The patient refused further treatment, and beyond inserting a rubber tube into the cavity (which the patient herself learnt to do) and syringing with creolin lotion, nothing further was done till January, 1899, when the patient again applied for active treatment.

She was taken into the hospital, and the inferior turbinal sawn off; the cyst was too large to extract through the nostril, and it was removed piecemeal with forceps, so the specimen was not obtained.

The cavity was in the substance of the turbinate; it was filled with pus, and surrounded by a fine shell of bone.

Since the operation a bead of pus is always visible external to the middle turbinate bone; and whether this originates from the antrum, ethmoid, or frontal sinus, it is difficult to ascertain. Trans-

illumination does not show any inequality of the infra-orbital shadows, and, if anything, owing to the absence of the turbinate, the left cheek is more transparent than the right.

Dr. Herbert Tilley said he had twice examined this case, but found he could not agree with Dr. Davis as to his view of the topography of the parts. The speaker said that the anterior half of the middle left turbinate had undoubtedly been removed, and the remaining portion of the bone was now plainly visible and could not be mistaken for anything else. The inferior turbinate was seen below, but a considerable portion of this had been removed also. The granulation mass seen in the middle meatus he regarded as typical of suppuration of the anterior ethmoidal cells, and he should attack this with Grunwald's forceps until a healthier region was reached, and thus prevent other accessory sinuses becoming infected, if that had not already taken place.

Mr. R. Lake had arrived at the same conclusion as Dr. Tilley, *i. e.*, that it was the middle turbinal which had been removed, and not the inferior.

Dr. Dundas Grant said the pus might arise either from the anterior ethmoidal cell or from the frontal sinus, and he thought it would be very difficult to exclude frontal sinus disease with the evidence at their disposal. There was a slight amount of tenderness over the left frontal sinus on percussion. One very characteristic sign of frontal sinus disease was that pus ran into the nose, chiefly after the patient moved about for some little while, as when on his way to business. This was a contrast to antral suppuration, in which the nose was usually full of pus on waking in the morning. As to the anatomical condition of the middle turbinal body, he should agree with Dr. Tilley's description.

Dr. William Hill had elicited from the patient some symptoms that would point to frontal sinus disease. She had a feeling of fulness at times, and the position of this struck him as suggestive of the implication of the fronto-ethmoidal cells. He thought the middle turbinal had been removed, and that the granular mass seen was much above the position of the bulla ethmoidalis, and probably sprang from the fronto-ethmoidal cells.

Dr. Davis said that when the patient first came to the hospital there was a swelling on the inferior turbinal body, as in Dr. StClair Thomson's case of the girl shown that day; the middle turbinal was jammed and pressed against the septum. The cyst was located on the inferior turbinal body, and he thought that what the members now saw was the stump of the inferior turbinal.

Fourteen months had elapsed since the operation. The middle turbinal had been scraped, and a polypus had been removed from it. One could see the back of the pharynx on looking through the inferior meatus.

Mr. Baber agreed with Dr. Davis. On examination he had seen a dilated nasal cavity with apparently a small inferior turbinated body lying on the outer wall, which he supposed was the remains of the amputated inferior turbinated body; the middle turbinated body was thickened by disease, and pus was seen on its outer side. Treatment would consist in removing the anterior part of the middle turbinated body as much as possible, and then investigating the antrum, when possibly pus would be found in it. That course must be followed before doing anything to the frontal sinus.

Case of Extreme Hypertrophy of Inferior Turbinals in a Boy.

Shown by Dr. Henry A. Davis. The patient, a baker boy æt. thirteen, has extreme hypertrophy of the turbinals on both sides. The hypertrophied tissues are soft and polypoid, and though they have been treated with cautery and snare, after a short time the hypertrophy is as large as ever. There is edema of the root of the nose; no adenoids are present, and headache is constant. He is to have both turbinals removed anteriorly, and is brought before the Society simply as a case of interest.

Dr. Herbert Tilley thought that such extreme hypertrophy of the inferior turbinals in a small boy was uncommon, and he suggested removal of the anterior extremities, which would give very great relief, whereas a galvano-cautery operation would be inefficient and not permanent in its results, because the bone as well as mucous membrane was hypertrophied.

Dr. Scanes Spicer had seen a similar extreme condition in a girl æt. thirteen, at St. Mary's Hospital that day; he had removed the hypertrophied masses with a cold wire snare.

Dr. Dundas Grant considered it might be difficult to introduce the scissors satisfactorily underneath the turbinal in this case, and under these circumstances he advocated the use of Bosworth's saw, cutting from below upwards. This instrument he had used in a good many of these cases for the purpose of cutting through the lateral attachment of the anterior part of the inferior turbinated body. When this was done it was easy to cut through the detached peninsula by means of a snare. Secondary hemorrhage was never great, and coming from a spot so far forward in the nasal cavity, it could be easily checked by means of a pledget of gauze. In this respect it contrasted strongly with the "spoke-shaving" operation.

Mr. Baber said if there was no thickening at the back of the turbinated bodies, he should snare off all the hypertrophied tissue in front, and if that was not sufficient he should remove the anterior end of the inferior turbinated bodies with scissors and snare. As regards plugging, he did not think he had ever plugged the posterior nares since he had been in practice. One ought to be able to find the position of the hemorrhage, and be able to stop it with long strips of gauze or lint introduced from the front.

Dr. FitzGerald Powell asked if the galvano-cautery should not be given a trial in the treatment of hypertrophy of the turbinate bones before resorting to the more severe method of removal by the snares and spokeshaves.

Dr. Davis said that on post-nasal examination there was no enlargement of the turbinal body, or adenoid vegetations, but some stenosis of the posterior pharynx. He had tried the galvano-cautery, and the growths had been completely snared off, but they always recurred. He had not applied any local treatment to the patient for a month.

Case of Extensive Ulceration of the Throat for Diagnosis.

Shown by Dr. Scanes Spicer. Patient was a man æt. nineteen, with extensive, continuous, painless ulceration of the mucous membrane, reaching from the nasal septum over the sides and posterior wall of the naso-pharynx and pharynx down to the vocal cords, and involving the epiglottis, which was pale and seamed with antero-posterior cicatrices, and not ulcerating now. The ulcerating surface was dry and covered with a glazed pellicle. The ulceration was quite superficial, and the surface did not readily bleed. The soft palate was almost entirely gone, but there was no loss of bone in the hard palate. There was no neoplastic granulomatous raised infiltrated margin, and nothing like "apple jelly" spots; and, except in the epiglottis, there was no cicatrization going on. The condition had lasted five years, but what treatment had been adopted could not be ascertained. There were no other evidences of syphilis, congenital or acquired, nor of ordinary tuberculosis. The age and several observations led him to consider it a case of lupus, and by exclusion of syphilis, tuberculosis and epithelioma, he was supported in this view.

The President said that twenty-five years ago the case would have undoubtedly been called a case of inherited syphilis; but there were no signs of this either in the teeth or eyes or elsewhere, and no other syphilitic signs. His epiglottis had an appearance rather suggestive of lupus. Personally he would look on the case as of the chronic tuberculous lupoid type.

Mr. R. Lake said this case reminded him of the class of patient formerly described as "syphilo-scrofula," a disease in children with some syphilitic and "scrofulous" taint.

Dr. StClair Thomson suggested testing of the case with the old tuberculin; it had not been used in these doubtful cases to the extent it might have been, as no harm could be done when the lungs were not affected; this was a matter for regret.

Mr. Spencer thought the ulceration of the palate certainly looked like a syphilitic lesion, and he suggested that iodide of potassium and mercury might be given for some time; there did not seem to be any marks of tuberculous taint about the patient.

Dr. Spicer thought there would be more destruction of tissue if this were syphilis, as the ulceration had been going on for five years. He could find also no other signs of syphilis, congenital or acquired.

Sir Felix Semon entirely agreed with the President; the epiglottis was so characteristic of lupus that probably no one would hesitate to make that diagnosis were it not that the pharyngeal aspect was more doubtful.

Dr. Lambert Lack thought that potassium iodide should be given if this had not already been done.

Dr. Scanes Spicer said the boy was taking iodide of potassium in five-grain doses since his first visit a week ago. He should be pleased to show the case again to the Society in three month's time.

Case of Hoarseness and Aphonia of Long Standing in a Girl æt. Thirteen.

Shown by Mr. de Santi. The hoarseness and whispering voice had been present from the time the child first began to talk.

The larynx appeared normal, and there seemed to be nothing the matter with the nasal or pharyngeal regions.

She had been treated with valerian and electricity, but with no benefit.

He asked for suggestions as to treatment.

The President said that the ventricular bands were thickened, and not as smooth and regular as in normal circumstances.

Dr. Dundas Grant said there was evidence of chronic purulent rhinitis; had treatment been directed towards the nose?

Mr. R. Lake understood Mr. de Santi to say "it was a rare case of a normal nose."

Mr. de Santi said treatment had not been directed to the nose. The patient had a brother, twenty-two years of age, in a somewhat similar condition, but there was some voice in his case. The mother was going to bring her son to see him (speaker).

Dr. Lambert Lack said in his opinion this was not a normal larynx, but a case of well-marked chronic laryngitis.

Case of Obstructed Subdermal Lymphatics of the Face, in which Frontal and Antral Disease had been Suspected.

Shown by Mr. de Santi. The patient, a woman of twenty-two, suffered from a curious affection of the subdermal lymphatics of both cheeks.

The left eye was nearly closed through edema of the upper and lower lids, and there was puffiness and edema over both frontal sinuses. The case was really not one for the Laryngological Society, but he showed it because it had been suggested that antral or frontal sinus mischief might be the cause of the trouble.

It was, however, quite obvious this was not the case, and Mr. de Santi diagnosed the condition as "blocked lymphatics." As to its causation, the patient attributed it to mosquito bites in Holland and Paris some three months ago, and this might possibly be the cause.

The treatment adopted was inunction with Ung. Belladonnæ.

Mr. Edwards remarked that this was not a laryngological case. He agreed with Mr. de Santi in the diagnosis.

Case of Ulceration of the Larynx.

Shown by Dr. Jobson Horne. The patient is a man æt. forty-five, with symptoms of eighteen or nineteen months' duration; at first weakness and uncertainty of voice at intervals, then hoarseness. For the last six or eight months he has been steadily getting worse, with at times complete aphonia.

There is pain and oppresion referred to the right side of the larynx, and a lump could be felt in this region for the past two or three months.

There is some wasting.

There is no history or evidence of tuberculosis in the lungs, and the examination of the sputum is negative.

Case of Tumor of Nasal Septum.

Shown by Dr. Herbert Tilley. The patient, a female æt. sixty-two, had a dark red, broadly pedunculated tumor growing from the right side of the septum. Nasal obstruction and repeated nose bleedings drew her attention to this mass last September, when the growth nearly reached the external naris.

It was removed by means of a snare, and profuse hemorrhage occurred some four hours afterwards, which was checked by plugging the nostril.

The growth has since then recurred, and is now the size of a broad bean, and is of a purple-red color and grows from the region of the tubercle of the septum.

The President thought it was suggestive of sarcoma, owing to the large amount of bleeding and the age of the patient. He advised operative interference.

Dr. StClair Thomson said the growth had the character of a fibro-angeioma or bleeding polypus of the septum. He had shown a similar case himself, and had watched several others which had been shown to the Society; so that he ventured to think Dr. Tilley need not be alarmed at any hemorrhage which might take place, or at the recurrence. One of Dr. Thomson's cases had recurred twice, and had been condemned as a sarcoma requiring free excision of the septum. The growth had simply been thoroughly snared, the base curetted and cauterized, and the patient was now alive and flourishing two years afterwards. Finally he would say: "Put not too much faith in pathologists, but be guided by the clinical symptoms."

In reply, Dr. Tilley said that Mr. Robinson had suggested the malignant nature of the growth because the septum was bulged towards the side opposite the seat of the growth. He (the exhibitor) thought that this deviation was only part of a general deviation of the septum, and that the slow recurrence of the growth after its first removal six months ago was opposed to the view of malignancy. It seemed more of the nature of a fibro-angeioma; he purposed removing the recurrence in the course of a day or two, and microscopic sections of the tumor would be shown at the next meeting.

Case of Pachydermia Laryngis.

Shown by Mr. Charles A. Parker. This case occurred in a male æt. forty-five, who works in a forge. He came to the Throat Hospital a week ago on account of dyspnea. He gave a history of having had a bad attack of laryngitis three years previously, and frequent attacks of hoarseness since then. Three days before coming to the hospital he had apparently a most severe attack of dyspnea.

On examination there was found to be an exceptionally large pachydermatous mass occupying rather more than the posterior third of either cord, and superimposed upon this chronic condition there was an acute laryngitis, with a plentiful formation of crusts. He was admitted into hospital on account of the dyspnea. The laryngitis is now much better, but the pachydermatous condition remains.

The case seemed worth bringing before the Society on account of its being an unusually well-marked example of pachydermia laryngis, and on account of the dyspnea which accompanied it.

Dr. Dundas Grant considered it very suspicious of tubercular disease, and if it were under his care he should give a diagnosis accordingly. There was much infiltration of the tissues round about what was otherwise a typical pair of pachydermatous growths, and the patient himself asserted he had been wasting and felt very flabby. Very often a diagnosis of pachydermia laryngis proved to be incorrect on further development.

Dr. Scanes Spicer did not see any evidence of tuberculosis in the larynx; the ventricular bands were greatly enlarged, red, and prominent; why was this? He was not aware that this remarkable enlargement, confined to the ventricular bands, was any evidence of tuberculosis. The condition of the cords was pathognomonic of what has been called pachydermia.

Mr R. Lake was in accord with the opinion of Dr. Grant; he would like Mr. Parker to show the case again if possible. The patient had lost flesh in six months; the masses of tissue were very red, more so than one would expect in a case of pachydermia laryngis, where they should be pale.

Mr. Parker had not examined the larynx at the meeting, but he thought that all the surrounding thickness and redness might be accounted for by the laryngitis the man had a week ago. This swelling was subsiding.

THE LARYNGOLOGICAL SOCIETY OF LONDON.

Fifty-Seventh Ordinary Meeting, April 7, 1900.

F. DE HAVILLAND HALL, M.D., President, in the Chair.

The President referred with regret to the loss the Society had sustained in the death of Dr. McNeill Whistler, one of the original members.

The following cases and specimens were shown:

Case of Laryngeal (?) Whistling.

Shown by Sir Felix Semon. The patient, a boy æt. thirteen and one-half years, who shows this physiological curiosity, was brought to the observer on account of a nervous cough. His father incidentally mentioned that the boy was able to produce a curious noise of a shrill whistling character with his mouth wide open. The Society will convince itself that this is so. The whistling sounds as if it were produced in the ordinary way, but as the boy can produce it whilst a laryngoscopic examination is being made, it is obvious that the origin of the sound must be in the larynx or even lower down. When he produces the sound it is seen that the epiglottis is forcibly drawn downwards, so that it is impossible to see the cords in their entire length. Enough, however, is seen of the posterior parts of the cords, and of the arytenoid cartilages to show that the glottis is not closed in its entire length, but that the inner surfaces of the arytenoids stand at least one and a half to two millimeters apart from one another whilst the whistling is produced. No abnormal movement of the chest can be perceived when the boy is stripped and then produces the sound. It is therefore very likely that the sound is actually produced in the larynx, although it is difficult to understand how it can be with comparatively so widely open a glottis.

The President thanked Sir Felix Semon for bringing this case before the notice of the Society. It was certainly a rare phenomenon. He wondered if any member had ever come across a similar case; he certainly had not himself. He thought they would all agree with Sir Felix Semon that the sound was produced in the larynx; he did not think there was any need for the mark of interrogation which was applied to the word "laryngeal."

Dr. Furniss Potter said it would be interesting to know if the whistling would take place if the epiglottis were held up. It seemed to him that on expiration the epiglottis became doubled upon itself, and was drawn down upon the arytenoid region. He wondered if it were possible that the whistling sound might be produced by the air passing through the chink formed by this drawing down of the epiglottis?

Mr. Spencer did not think the whistling was due to the position of the epiglottis; the whistle had still been heard under the conditions the previous speaker mentioned; besides, the epiglottis was not drawn down so far as Dr. Potter imagined.

Mr. Waggett asked if Sir Felix Semon had obtained a view of the bifurcation of the trachea? Was it certain the boy had not some structure resembling the syrinx of a bird? The notes produced had the characters of the birds' notes.

Dr. Bond mentioned that some twelve years ago he remembered a student at the Golden Square Hospital who could whistle with the top of his larynx. He had abnormal power over his throat muscles altogether; for instance, he could put the tongue behind the soft palate and swab out the naso-pharynx. It was easy to see the larynx during whistling. The student simply used the sides of the brim of the larynx, *i. e.* the ary-epiglottic folds in the same way that he used the lips when whistling with his mouth. The epiglottis had nothing to do with the production of the sound. He did not remember whether whistling with the larynx and the mouth at the same time could be performed.

Sir Felix Semon, in reply, said that although he had seen a good way down the trachea he had not seen the bifurcation. He did not think that either the epiglottis or the aryteno-epiglottidean folds had anything to do with the production of the sound. There could be no doubt that during its production the vocal cords remained a good deal apart. His own—although very theoretical—explanation was, that the boy probably had an unusual amount of control over the crico-thyroid muscles, and that it was owing to their forcible contraction, and to the unusual amount of tension of the vocal cords produced thereby, that when a forcible expiration was made the sound was produced. Mr. Waggett's idea of the syrinx was very interesting, but he could not say whether it applied to the case.

Case of Rhinoscleroma.

Shown by Dr. Dundas Grant. A female æt. twenty-six, came under my observation on July 14, 1898, on account of complete

obstruction of both nostrils. The tip of the nose was found to be hard and swollen, and the nostrils were completely blocked by a reddish growth of almost fibrous consistency; there were fine symmetrical scales on the soft palate, and the uvula had completely disappeared. It was impossible to obtain a rhinoscopic view, but the finger introduced into the naso-pharynx enabled one to detect a firm dense bar extending horizontally across the lower margin of the posterior nares. A microscopic preparation of a portion of tissue removed was made by Mr. Wingrave, and Dr. St. George Reid made a cultivation which he considered showed the capsuled bacillus typical of rhinoscleroma.

The case disappeared for about a year, but about six weeks ago she returned with the nostril quite blocked, my previous treatment of scraping and dilating having had only a temporary effect. I managed to introduce a fine tangle-tent through the diminutive orifice, and then inserted a small pledget of cotton wool dipped in pure lactic acid.

The President said the case was similar to one shown by Sir Felix Semon and Dr. Payne at the Pathological Society a good many years ago, that was the last case of rhinoscleroma he had heard of in London.

Dr. Watson Williams asked if the condition of the soft palate had been modified to any great extent by treatment?

Mr. W. G. Spencer asked if there had been any infection or any history of inoculation from any members of the family, or from any persons in the district where she lived with whom she had associated.

Sir Felix Semon referred to the case which Dr. Payne and he had shown many years ago at the Pathological Society, and the illustrations of which in that Society's "Transactions" he handed round. In that case the changes were even more pronounced than in Dr. Grant's case. Two hard, red, semi-globular tumors protruded from the nostrils, whilst the palate was in a condition similar to that seen in Dr. Grant's case. The hardness of the tip of the nose in the present case was very characteristic. The result so far obtained by Dr. Grant by the application of lactic acid in one nostril was very satisfactory, but he was afraid that it would be as temporary as the one obtained by himself in his own case, by means of the galvano-cautery. In that instance directly the treatment ceased the disease returned. The patient had passed out of his hands into those of the late Sir Morell Mackenzie, who had published a note about the case in the *British Medical Journal.* He, too, had obtained no lasting results.

Dr. StClair Thomson asked if the palate was characteristic of the disease. In the few cases he had seen in Vienna, the palate was never left so mobile as in this instance, though this was merely a question of degree; nor did the rhinoscleroma heal up so completely—it was more thickened and leathery. He also inquired if this case coincided with the pathological tests—bacteriological and histological—of rhinoscleroma.

Dr. Dundas Grant, in reply to Dr. Watson Williams, said the palate was in exactly the same condition now as when the patient first came to see him; nor was she conscious of ever having had particularly soar throats. He was unaware when the change took place. In reply to Mr. Spencer, he was not aware of any infection or inoculation. The patient had had iodide of potassium, but it made no difference to the condition. Cultures had been taken and answered exactly to the description of rhinoscleroma. They were totally dissimilar to those of leprosy. They showed diplo-bacilli, with extraordinarily large capsules.

Specimen of Larynx Removed on Account of Sarcoma.

Shown by Dr. Dundas Grant. A female, æt. forty-nine, came under my care on February 6th, on account of loss of voice and difficulty in breathing, the former having gradually developed since the month of July, and the stridor since December. The stridor seemed from its tone to arise somewhat deeper than the larynx; it was purely expiratory in character, and was accompanied by excursion of the larynx. There was no pain on swallowing. On examination externally I found a well-marked bulging of or on the right ala of the thyroid cartilage, and the laryngoscope revealed a rounded sessile growth underneath the right vocal cord, the surface of which was fairly smooth; the left vocal cord was immobile and almost completely hidden by the ventricular band, the left half of the vestibule being distinctly swollen. The diagnosis lying between malignant disease, probably epithelioma, and syphilis, inquiry elicited that she had had one miscarriage, then one still-born child, then four boys, all strong and well, and afterwards one girl, who only lived for forty hours, and lastly the youngest child, now aged sixteen, and who is rather short in stature. I decided to give antisyphilitic remedies a trial, but in view of the possible danger of edema of the larynx arising from iodide of potassium, I recommended her coming into the hospital, where for a fortnight she was treated with iodide of potassium and mercurial inunctions. Her dyspnea seemed very slightly to improve, but practically things remained *in statu quo*, as when she moved about the dis-

turbance in breathing was quite as bad as ever, and the voice became if anything weaker. My colleagues agreed with me that it was a case of malignant tissue, and with one exception, considered it a suitable one for extirpation of the larynx. My friend, Dr. Lambert Lack, kindly placed his experience, both in the diagnosis and operative treatment, at my disposal, and on March 3d I removed the larynx, as you see. The patient is still in hospital; the opening into the pharynx is rapidly diminishing in size, and I hope to bring her before the Society at a later date, and to give the clinical details with more completeness. Meanwhile, the preparation shows the larynx opened from behind; the stump of the epiglottis is visible, as also the rounded growth under the right vocal cord, which was singularly conspicuous in the laryngoscopic image; the much larger growth underneath the left vocal cord somehow eluded inspection, probably because it was hidden by the infiltrated parts on the right side. The section under the microscope shows it to be a well-marked sarcoma, which, I presume has grown from the perichondrium on the inner surface of the thyroid cartilage. Had it started from the outer surface, I venture to believe that the external swelling would have attained much greater dimensions during the eight months that the disease has certainly existed.

The President hoped Dr. Grant would show the patient later on.

Case of a Girl with Hereditary Syphilis causing Hypertrophic Laryngitis, and showing Recesses in the Naso-Pharynx produced by the Approximation of the remains of Luschka's Tonsil and the Eustachian Cushions.

Shown by Dr. StClair Thomson. After the various opinions enunciated at the last meeting *apropos* of Mr. C. Heath's case, Dr. StClair Thomson feared there might have been a plethora of cases shown by members to illustrate their divergent views. He himself could easily have brought half a dozen cases from his clinic to demonstrate that, what had been called "sinuses in the vault of the naso-pharynx," were nothing but depressions produced as the title of his communication described.

The case shown was selected for exhibition, as it also illustrated the laryngitis which sometimes developed with hereditary syphilis. He had found that the hoarseness and loss of tone in the voice in these cases was apt to remain in spite of specific treatment, and he would be glad of suggestions for treatment on this point. The girl had been under inunctions of mercury for some time.

Mr. Yearsley thought most members could bring cases forward showing the recesses formed by Luschka's tonsil quite as well. One noticed them pretty frequently in one's clinic.

Six Cases of Frontal Sinus Empyema.

Dr. Herbert Tilley showed six cases of chronic frontal sinus empyema, upon five of which he had performed the external radical operation. Three cases were bilateral, and of these one had been operated upon on both sides; the others, as yet, on one side only.

In three of the cases, after freely removing the anterior wall, curetting away the diseased mucous membrane, and making a large opening into the nose, a Luc's drainage-tube was inserted, and the external wound sutured at the close of the operation. In the remaining two the sinuses were packed with gauze instead of inserting the tube, a method which Dr. Tilley considered far preferable to Luc's operation. The exhibitor thought that the success of the operation depended upon careful attention to three main points:

1. Removal of the anterior end of the middle turbinal and all chronic inflammatory products in the mid-meatal region before proceeding to the external operation.

2. Making a free passage into the nose.

3. Careful curetting of the diseased mucous membrane, followed by packing with gauze until a healthy lining of granulation tissue was produced.

By making the incision in or immediately below the eyebrow the scar, as in the cases exhibited, was scarcely noticeable. The sixth case was interesting in that over the region of the left frontal sinus was an expansion of the outer wall of the sinus, resembling superficially a syphilitic boss the size of a five-shilling piece. The patient had complained of very severe headaches, accompanied by profuse discharge of pus from the nose, and the nostril was blocked by many large polypi. Since these had been removed the headache had entirely ceased, and it was easy to irrigate the sinus through the nose.

[This case was operated upon the following day; the left sinus was so large that a double thickness of iodoform gauze, two inches wide and three feet ten inches in length, was easily packed into the cavity.]

Dr. Pegler asked if all these cases had been treated alike without drainage tubing, and stuffed with gauze only?

Dr. Watson Williams asked how many of these cases were found to have the fronto-ethmoidal cells involved. The cosmetic, as well as the surgical results, were excellent in all, and surprisingly good in most of the cases. The series presented certainly reflected great credit on rhinology, and on Dr. Tilley in particular.

Dr. Powell congratulated Dr. Tilley on the most excellent re-results obtained. With regard to the cases that went wrong, and the dangers that had occurred after the operation, he had always been of the opinion that it was possibly due to too much interference with the posterior wall of the sinus. The posterior wall was generally scraped too much, and the interference gave rise to septic embolism and thrombosis. Perhaps Dr. Tilley would mention his views on this point.

Mr. Waggett asked to what extent the lining of the sinus was removed, whether to the bone or not?

Dr. Dundas Grant asked whether in operating freely through the floor of the sinus there was not great liability to damage the superior oblique muscle?

Dr. Lambert Lack wished to know if he was correct in understanding that Dr. Tilley did not open the sinus through the anterior wall. He thought there was almost if not quite as much danger in operating from the floor of the sinus as from the anterior wall. It was necessary to remove the anterior wall in a certain number of cases to obtain a proper view of the sinus; the danger resulted only in the cases in which proper drainage was not subsequently provided for. It was his (the speaker's) general procedure to detach the pulley of the superior oblique, but this had never given rise to diplopia.

Dr. Scanes Spicer asked if Dr. Tilley found he could explore every part of the sinus from the inferior wall?

Dr. Tilley, in reply, said that he always removed the anterior wall, but not the floor of the sinus, which was really the roof of the orbit, and which, he considered, it was wise to treat with a certain amount of respect. He thought it would be impossible to treat the sinus satisfactorily if the surgeon attempted to enter it from the floor, whereas, removal of the anterior wall gave free access to the cavity. The cases had not all been similarly treated, in the earliest cases he had used Luc's tube and sewn up the external wound at the close of the operation, but he thought such a method was extremely risky. If suppuration recurred, the inflammatory products were pent up under tension, because the drainage-tube was very liable to become blocked or not to drain efficiently,

and septic phlebitis of the diploeic veins had occurred in at least seven recorded cases. This complication was almost certainly a fatal one, but it was an almost impossible one if packing or free drainage through the external wound and fronto-nasal canal was permitted. As to how much of the diseased mucous membrane was curetted away Dr. Herbert Tilley said he could not give a perfectly definite answer, he curetted until all granulation tissue and obviously diseased products were removed, but a certain thickness of lining membrane would be left. Temporary strabismus was not uncommon after the operation, but passed off within a week or fortnight as a rule; it was due to disturbance of the pulley of the superior oblique muscle during the operation and possibly to inflammatory exudation following the operation. In small sinuses, removal of the whole exterior wall produced an excellent result and obliteration of the cavity; in larger sinuses, especially in females, the surgeon would be guided by the size and conformation of the cavity as to the amount of the anterior wall he would remove.

Case of Abnormal Pulsating Pharyngeal Vessel.

Shown by Dr. Herbert Tilley. The patient is a girl æt. six years, suffering from enlarged tonsils and adenoids, complicated by the presence behind the right posterior pharyngeal pillar of a large pulsating vessel, possibly an abnormal ascending pharyngeal artery. He desired the experience of members as to the advisability of operating upon the tonsils and growths.

Mr. Spencer advised that the pharynx should be scraped. He saw no danger in the case; the carotid must be quite half an inch or so distant, and the pulsation was communicated.

Mr. Robinson thought it was as likely as not to be a large ascending pharyngeal artery; it was very difficult to say which it was. As far as operative measures were concerned, there was no need to fear any damage because of the position.

Dr. Scanes Spicer thought that the adenoids in this case might be safely removed—by an experienced operator. He added this because he had heard of two operations in which the pharyngeal aponeurosis was cut through, one case ending fatally from multiple abscess and septicemia.

Specimen of Nasal Angio-Sarcoma, Shown at Last Meeting.

Shown by Dr. Herbert Tilley. The specimen was prepared by Dr. Jobson Horne, who regarded it as an angio-sarcoma.

Case of Esophageal Stricture Under Tubage for Twelve Months.

Mr. Charters Symonds showed a man of sixty-three, who came to Guy's Hospital, February 24, 1899. The symptoms had existed for a year. The stricture admitted a No. 12, and was thirteen inches from the teeth. A four-inch tube was inserted. This was removed April 21, and left out. On April 24 he was admitted with complete obstruction. A long tube was passed and withdrawn May 1, when a short tube was inserted. May 28 the tube was removed and another (No. 13) introduced. Since then this tube has remained in position, a period of eight months, and is still useful. The man has maintained his weight, can attend to his business and has no discomfort. He takes finely minced meat besides fluids and eggs.

The points of interest are, the long duration—two years—of a stricture apparently malignant in this situation; the possibility that the case is one of sarcoma; the complete relief afforded by the tube; and the durability of the silk and tube. It may be added that the silk in the mouth is protected as usual by a piece of rubber tubing.

Case of Extensive Necrosis following Nasal Polypi and Sinus Disease.

Mr. Spencer exhibited a woman about forty, who, previously to being seen by him, had for many years suffered from polypi in the nose, and suppuration in the maxillary antrum and ethmoidal and frontal sinuses. Extension had taken place by the nasal duct causing purulent conjunctivitis, which had left a central corneal opacity. The maxillary antrum and the interior of the nose had been actively treated; also the front wall of the frontal sinus, including the upper margin of the orbit, had been removed. But there remained a long sinus extending backwards to beyond the anterior sphenoidal fissure, where dead bone was to be felt. Attempts to scrape away the dead bone in this position had been attended by profuse hemorrhage, and it seemed only too probable that the necrosis would continue.

Case of Malignant Disease of Pharynx and Larynx.

Shown by Mr. Macleod Yearsley. The patient, a woman æt. fifty-nine, had been suffering from "sore throat" for some two and a half years. Recently she had been getting worse and had considerable dysphagia. On laryngoscopic examination the disease was found to involve the lower and posterior part of the left tonsil, the base of the tongue, and the upper orifice of the larynx. There was no specific history, but the case had been placed upon anti-syphilitic treatment. The patient denied that she had been under any treat-

ment but that of her private doctor, but since her arrival at the meeting she had informed Mr. Yearsley that she had already been shown to the Society by Mr. Waggett.

Case of Tonsillar Ulceration of Uncertain Origin.

Shown by Dr. Dundas Grant. A female, æt. thirty-nine, came under my observation on the 22d March, 1900, complaining of sore throat and deafness. The former commenced five weeks before with considerable suddenness, with pain on the left side of the throat, extending to the left side of the head, face and the left ear. Her voice was extremely thick, and she complained of a tickling in the throat giving rise to cough and sickness; the pain in the throat was most marked during the swallowing of solids. On examination there was a considerable irregular swelling of the left tonsil, and round its outlines was an irregular sinuous, somewhat rough margin of an opalescent tinge tending to white; on the left tonsil there were irregular opalescent patches with slightly raised edges. On palpation the left tonsil was felt to be extremely hard. At the commencement she stated that there was a considerable enlargement of the glands at the left angle of the lower jaw, which lasted for about three weeks; just before she presented herself her voice became extremely hoarse, and the right side of the throat became painfully swollen. Her hair was falling to a notable extent for about a week before the throat manifestation, and continued to do so until mercurial preparations were administered. In November she was nursing what was described as a "premature baby," born at six months, and which only lived a fortnight; the child was much wasted, and suffered from erythema of the nates.

The physical aspect of the case suggested secondary specific affection of the mucous membrane, but the induration of the left tonsil had some of the characters of malignant disease. A provisional diagnosis was made, therefore, of primary infection of the left tonsil with secondary mucous patches of both. Mercurial pill with opium was ordered, and at the end of a week the patient announced herself as considerably better, although inspection of the fauces revealed little change.

Case in which there was Difficulty in Removing a Tracheotomy Tube.

Shown by Mr. Roughton. The patient was a girl, æt. five years, upon whom tracheotomy had been performed four months previously. There was now complete laryngeal obstruction, and the tube could not be dispensed with. He asked for suggestions as to treatment.

The President referred Mr. Roughton to a paper read before the Medical Society of London by Mr. Bernard Pitts, some four or five years ago,* which dealt with intubation. It struck him at the time as giving serviceable methods for treatment.

Dr. Dundas Grant said he had just operated on such a case; the patient was a little girl of about four. He tried to introduce an intubation-tube, but it stuck absolutely. He then dissected down on the trachea, and worked upwards till he reached what was thought to be the level of the cricoid cartilage, where there was a narrow structure, through which it had been impossible to pass a bougie of greater size than No. 3. He then introduced the intubation-tube through the larynx and stitched up the whole wound. This was done on a Tuesday, and on the Friday following she was breathing through the tube, but there was great difficulty in taking it out—on doing so, dyspnea returned, so he again restored the tube, and was now awaiting further developments.

Dr. Davis said that obstructions occurred in the great majority of cases if adenoids were present. The child, judging from the enlarged glands, had big tonsils and so presumably adenoids. Adenoids should always be removed in every instance. Where this had been done he found that the tube could be taken out with ease.

Dr. Lambert Lack had shown a case to the Society at a previous meeting, in which intubation had been tried for a long time, and it worried the child's life out. The child could not swallow well with the tube in position, and therefore it had to be frequently removed and replaced. It was impossible to dilate any fibrous stricture unless the dilating instrument was kept in place for a long time. A tube or plug passing from the tracheotomy wound upwards into the larynx, or the T-shaped tube, was much more comfortable, and could be worn continuously. One case of laryngeal stricture after diphtheria was completely cured by this means. A solid plug was better than a tube, as it was easier to remove, and did not collect mucus.

Mr. Spencer thought an intubation-tube a source of trouble. It was necessary to remove the fibrous tissue and granulations. He would then insert a T-shaped cannula, made in two pieces for convenience of removal. The tube leading outwards could be blocked at will, so as to reaccustom the child to breathing through the larynx.

* The date of the paper was December, 1890.

Laryngeal Case for Diagnosis.

Dr. Scanes Spicer showed a lad who had two months ago exhibited a distinct small, sessile, papilloma about the center of the left cord, associated with multiple papillomata on the hands, arms and body. The application of a spray of salicylic acid in alcohol (℥ss to ℥j) had been followed by the complete disappearance of the wart on the cord, but the hoarseness was not better, and on examination the ventricular bands were seen to be in a rough, reddened state; a thickened mass was seen on the inter-arytenoid part of the posterior wall, and the right cord did not move freely. As these latter appearances were not present two months ago, the question arose as to whether they were due to extension of the papillomatous growth, or were tubercular, or if they resulted from the irritation of the salicylic application. This had only been used three or four times, and had been discontinued for six weeks. He asked if other members had seen any similar results from application of salicylic acid in this region.

The President suggested that possibly the salicylic acid spray was responsible for the condition seen; the boy was suffering from hoarseness, and had small papillomata in the larynx. Certainly these when irritated might bring about such a chronic inflammatory condition. He advised leaving off the local treatment for the present, and in view of the warty growths on the hands, giving some arsenic, which had a wonderful power of clearing up warts on the skin; the larynx might be benefited by this treatment.

Mr. Spencer remarked upon the enlarged glands in the neck, especially the laryngeal. The sputa should be examined in view of possible tuberculous disease.

WESTERN OPHTHALMOLOGIC AND OTO-LARYNGOLOGIC ASSOCIATION.

(OTO-LARYNGOLOGIC SECTION.)

The Western Ophthalmologic and Oto-Laryngologic Association held its fifth annual meeting at St. Louis on the 5th, 6th and 7th of April, 1900.

The president, Dr. W. Scheppegrell, of New Orleans, opened the meeting with a paper on "The Rise of Specialism," in which he disapproved the oft-repeated charge that specialisms in medicine are modern innovations. He cited historical data dating several centuries before Christ, in which distinct references were made to specialists of the eye, stomach and the head. The essayist commended specialists in medicine, as they promote more detailed study and thereby lead to higher medical attainments.

Slight Irregularities of the Nasal Septum—EDWIN PYNCHON, M.D., CHICAGO, ILL.

In a perfect nose the septum divides the two passages into equal size, and at no point should opposing surfaces touch, even where the erectile portions of the turbinals are most congested. As the antrum half of the inferior turbinal is the most erectile of the nasal tissues, it is here that most room is required; therefore, this portion of the passage will appear equally roomy when the turbinal congestion subsides. There is no dispute among rhinologists as to the necessity of an operation when the lumin is noticeably diminished, but in slighter defects and deformities, opinion varies as to the necessity for operative procedures. The reader dwelt upon what he named "anterior soft hypertrophies" on the septum, which could be satisfactorily destroyed with the galvanocautery. Posterior white hypertrophies on either side of the septum required similar treatment. In looking into an obstructed nose, height and color is our first observation, caused chiefly by the friction by the to and fro passing currents of air which touch with more force any point of septal prominence, making it both dry and irritated. Another way a small growth may cause annoyance is by obstructing drainage, as a stone in a gutter, when the patient is lying with the affected side uppermost. The secretions are for a time retained and serve as fuel by a species of auto-infection.

The same may be said of any two opposing surfaces. In spite of the rhinologist's commandment, "Touch not a growth upon the septum which obstructeth not," from his understanding of the philosophy of nasal respiration, the writer was convinced that operation within reasonable bounds was the only rational practice for a rhinologist to follow as clinical experience has corroborated his theory. A prominence might not seem to obstruct in a warm room which would under slight congestion of the turbinal, if the prominence was well followed by the mobility of the alæ nasi further assisted in the obstruction; therefore, a simple prominence well forward was more harmful than a growth of smaller size further back. In such cases the stenosis is intermitting. No possible harm could come from operating on these slight irregularities, particularly as they are absent in cases of a perfect septum which is, as before stated, practically plane. As to the surgical treatment, it was wise to proceed to intranasal operations by a few days' medical treatment in the form of local applications in order to reduce hyperemia to the minimum. For the operation the knife, the saw or curette may be used singly or successively. When the thickening is low down near the floor, a saw curved on the flat can be used to better effect than a flat saw. Such a curved saw I have had made in pairs, a right and a left. Succeeding the operation daily treatments for about two weeks are of the utmost importance in order to obtain ideal results. At each treatment the wound is to be massaged with a cotton wound applicator which may be medicated with camphor-menthol twenty per cent or with a ten per cent solution of antinosine. The massage for the first two or three days should be gentle, but after that it should be energetically applied. Each massage should be preceded by a brief application of cocaine to minimize the discomfort.

DISCUSSION.

Dr. A. R. Amos, Des Moines, Iowa, thought the use of the burr and saw would necessarily destroy the mucous membrane and result in scar tissue which would cause annoyance. Therefore he would use caution in these operations. He preferred a straight canal and a simple operation on the turbinal which should be followed by scar tissue.

Dr. O. J. Stein, Chicago, thought Dr. Pynchon an idealist and an enthusiast upon the subject. He, himself, preferred to occupy a middle ground and not be so radical as to attempt to correct all slight irregularities, or to ignore the fact that many of these slight conditions do cause sufficient disturbances to demand attention.

As the election of the site of operation he leaned toward the septum. He used the electric cautery but little. In the main he disregarded the mucous membrane in operating on the septum and did not experience ill results therefrom.

Dr. F. C. Ewing, St. Louis, emphasized his belief that there is just one rule by which we should work in considering such cases: a creation of the normal relationship between septum and turbinal. When he looked into a nose he did not mind the amount of breathing space left and if a reasonable passage was preserved, he did not consider a spur here or a ridge there. He was opposed to the cautery on the septum. He thought the tendency of specialism was to draw distinctions too fine where there were no ideal organs. When we find them necessary to existence, we might as well prepare to die. He thought Dr. Pynchon's contention that a slight convexative might interfere with drainage when lighting on the well side was a case of drawing too fine a distinction. The normal mucus is evaporated and does not irritate. If so thick as to clog it would do so anyhow, so the comparison of a slight irregularity, acting like a stone in the gutter and preventing drainage, he thought was poorly rational.

Dr. M. A. Goldstein, St. Louis, thought there was a condition rife among special practitioners of an excess of operative enthusiasm, and unfortunately it was not abating. He did not consider slight irregularities of the septum as usually indicative of operative interference, and declared that more conservatory measures should be given consideration in nasal surgery. It should not be forgotten that injudicious operations on the septum with cautery and burr may be fraught with danger to the underlying structures. This was especially true of the cartilaginous septum and the associated poorly-nourished cartilage. He believed, with the previous speaker, that the lumen may be better increased by reduction of the adjacent thickened turbinal. The main indications of interference must be a growth or deflection sufficiently developed to cause obstruction in breathing or irritation by undue tension of the mucous membrane or interference with the normal drainage.

Dr. W. L. Ballenger, Chicago, thought operations on the septum should only be attempted with the end of overcoming the disturbances of the physiological functions of the nasal mucous membrane, and he thought that Dr. Pynchon overlooked the tendency of nature to overcome abnormalities of function and anatomical development; for instance, the compensatory hypertrophy of the turbinal upon the concave side.

Dr. Pynchon, closing the discussion:

Dr. Goldstein, in advocating conservatism, advises against "excessive operative enthusiasm." My own experience with intranasal surgery has been so favorable that I can only reiterate the points made in my paper. Without the surgical steps what shall we do with those patients who have had an extended course of non-surgical treatment without lasting results? The indications for operation are either obstruction or the presence of slight septal projections which give evidence of irritation.

In reply to Dr. Amos, I will say that, with my method of operations on the septum, including the after-treatment suggested, I do get the ideal results which he desires. In my opinion scar tissue does result from cauterizations of the inferior turbinal. Of late years I rarely cauterize the anterior end of this body.

Dr. F. C. Ewing read a paper on

Recurring Parotitis Persisting for Ten Years in a Healthy Child.

The case, the writer's son, a boy eleven years old, had been subject to recurring attacks of parotitis, generally unilateral, since the second year of his birth. Family history good. Child otherwise healthy and considerably of an athlete. Attacks manifested themselves suddenly and subsided in a day or two without treatment. No attended enlargement of the lymphatic glands and no general disease complicating. A careful search of standard text-books on surgery and medicine and magazine literature revealed no cases that could parallel this. Though not expressing a positive opinion, the reader is inclined to consider this a case of simple infectious disease of the duct of Steno (said duct being probably extra patulous) causing swelling of the gland by a microbe, the identity of which is unknown. In the *Journal de Med.*, Ed de Paris, January 1, 1896, Regnier regarded three cases of infection through Steno's duct, but with accompanying constitutional disease, and pointed out thefallacy of considering parotid inflammations invariably caused by secondary inflammation of the lymphatic glands. Chassaignac was the first to direct attention to this variety. He declared it to be canalicular. Virchow and Weber also observed cases where the pus and lesions were in the canals. The researches of Dupre and Claisse are confirmatory of this position. The supposition that the swelling was infectious was justified by the fact that the liver, kidneys and breasts may be affected by their secretory ducts.

Dr. M. A. Goldstein testified that he had seen the case, and acquiesced in the statement that the lymphatic glands were not enlarged. He would express no opinion as to the etiology.

M. A. Goldstein, M.D., St. Louis: Presentation of cases:

(a) Primary Tuberculosis of the Ear; (b) Primary Tuberculosis of the Larynx.

(a) Primary Tuberculosis of the Ear.—White, female, æt. thirty-two; history of mastoid fistula during childhood, the result of mastoid abscess which had not received prompt surgical attention.

When this case was first brought to my notice, in June, 1899, an early mastoid operation was indicated. The discharge had continued intermittently ever since the early mastoid invasion. During the last few months the discharge has been sanious and foul-smelling in character. The patient complained of acute, sharp pains in the area of the mastoid. Examination revealed much soft granulation tissue in the fundus of the external auditory canal, the canal wall somewhat sagging and the mastoid area showing beginning infiltration, and was extremely sensitive at the slightest pressure; marked rise in temperature.

On exposing the antrum by the Schwartze operation, this whole area was seen filled with unhealthy granulations and suspicious-looking cheesy detritus. This was carefully curetted as was also the granulation tissue, in the middle-ear cavity, and an unusually large opening was made in connecting the antrum with the tympanic cavity.

Examination of the cheesy deposit taken from the mastoid cells and antrum revealed the presence of tubercle bacilli, in some fields almost in pure culture.

A thorough physical examination of the patient failed to reveal the presence of any other tubercular lesion.

The wound began healing satisfactorily, but during the later stages of convalescence it was noticed that the granulations filling the site of the operation were unsatisfactory in character, and a stubborn, scant discharge was maintained. Unfavorable symptoms gradually developed, and in November, 1899, the radical operation was performed. The largest portion of the previously operated mastoid area appeared healthy and the granulations firm. Along the direct tract of the antrum and tympanic cavity, however, there were indications of reinfection. A radical curettement was made of the entire mastoid cell-structure, of the antrum and tympanic

cavity. One inch of the lateral sinus was exposed and found healthy; some of the deeper points in this large excavation which could not be readily reached by the small curette were touched with pure guaiacol.

The patient is now presented with the sinus nearly closed; discharge from the auditory canal has ceased; general condition constantly improving and with no secondary tubercular involvement apparent after repeated, careful physical examinations.

In the last operation the area of the Fallopian canal was likewise thoroughly curetted, regardless of its possible invasion, and there is still some facial paralysis, but this is now much less marked in character than shortly after the operation.

It may also be of interest to state that during the stage of this second convalescence the patient had an attack of erysipelas starting from a point close to the margin of the mastoid incision, and that improvement appeared much more marked after the erysipelas had subsided.

(b) Primary Tuberculosis of the Larynx.—This case is submitted not only because of its rarity as a case of primary tuberculosis of the larynx existing without other tubercular involvement for a period of four years, but also on account of the apparent difficulty in establishing the diagnosis.

The patient, white, male, æt. thirty-seven, gives no tubercular history. The only etiological factors which are considered of any consequence are: 1. The patient is an inveterate smoker, using from twenty to twenty-five cigars per day. 2. During the severe cyclone which visited St. Louis in May, 1896, the patient was exposed to a severe wetting and cold, and the aphonia now present dates from that time.

My observations of this case began in January, 1898. At the first consultation I found him confined to his bed, almost moribund, greatly emaciated, coughing excessively, complaining of intense pain, especially on deglutition and with complete aphonia.

Laryngeal examination revealed a characteristic turban-shaped epiglottis, mucous membrane greatly infiltrated, pale in color, and the lumen of the glottis narrowed to such an extent that it was absolutely impossible to examine the interior of the larynx or see the ventricular area. The arytenoid cartilages were also greatly infiltrated and thickened like the epiglottis.

The patient had been subjected to the influence of cocaine and morphine to such an extent that his nervous system was on the

border of collapse. The administration both of morphine and cocaine was checked, local applications of lactic acid (fifty per cent in glycerine) and guaiacol (twenty per cent in glycerine) were applied alternately, each being used for about one week daily. Internal administration of bovinine and maltine were also used alternately for one week each. In about four weeks the patient was up and out, and in another four weeks he had gained ten or fifteen pounds. The pain had subsided for the greater part, the cough occurred less frequently and the paroxysms were much milder.

A microscopic examination of the sputum has been made almost weekly during the past year, and at no time has there been a trace of the presence of tubercle baccilli.

In the early treatment of this case, as soon as the patient was in a physical condition to stand it, he was placed on increasing doses of potassium iodide, with the possibility in view of the lesion in the larynx being syphilitic in character. No results observed.

In conclusion I desire to say, before submitting the case for your examination, that at no time has there been any evidence of ulceration as far as could be determined by laryngoscopic examination.

Owing to the special interest which centers about this case every possible feature of it has been taken into consideration. A number of our prominent diagnosticians have been invited from time to time to make a thorough examination, and no pulmonary lesion has been determined.

About two weeks prior to this meeting, Dr. Wm. Porter, of St. Louis, by my invitation, made another careful physical examination, and I believe the doctor is prepared to present the results of this last examination.

From the clinical history, from the repeated examinations, from the character of the symptoms, from the exclusion of the several other possible lesions of the larynx to which this case may bear some similarity, it is my belief that we have here a case of primary tuberculosis of the larynx. If this diagnosis is correct and can be substantiated, it is one of the rarest cases of primary tuberculosis in the annals of laryngology; a case of four years' standing, without any other tubercular involvement, with no indications of ulceration of the laryngeal structure and with the tendency of improvement.

DISCUSSION.

Dr. Wm. Scheppegrell, of New Orleans, believed that the primary infection of the ear is rare, the origin of the disease being more

probably in the lymphoid tissues of the naso-pharynx. It had been demonstrated that a considerable portion of these examinations show tubercle bacilli and infection, therefore, is a very easy process. He thought tubercular diseases of the ear present much oftener than usually supposed, as a bacteriological examination is unfrequently made. The laryngeal case was also interesting. While presenting many of the cardinal symptoms of laryngeal tuberculosis, its long duration and improvement of the case from topical applications was opposed to the diagnosis. It reminded him of a case of perichondritis, seen some years ago, which had been treated for laryngeal tuberculosis, though many of the lesions of this disease were present. It appeared tubercular until there was a gradual protrusion of a necrosed arytenoid, upon the removal of which the patient made a complete recovery. Had this been tubercular it would not have recovered with this simple procedure. However, he believed that primary tuberculosis of the larynx does sometimes occur.

Dr. F. C. Ewing stated that he was present at both the operations on the mastoid. The first one was a good clean operation, but the case did not heal. Later, Dr. Goldstein did quite a radical operation without special consideration of the nerve or the usually regarded topography of the parts.

In connection with the laryngeal case he would mention that of a cornetist that he had treated successfully and what was also seen and diagnosed by the late Dr. Mulhall. Repeated examinations in this case failed to demonstrate the bacilli and neither he nor Dr. Mulhall found any evidences in the chest. The patient was given 30 grain doses of iodide of potash without result. Injections were then made of ⅛ grain corrosive sublimate without effect upon the ulcerated larynx. Later a more careful examination was made of the chest and one small crepitating spot was found which was confirmed when pointed out by Dr. Mulhall. The case got well under the usual hygienic treatment and applications of lactic acid and has continued so for four years. He weighed 127 pounds when he began, and now weighs 160. His voice which was almost gone is now slightly hoarse. The special point to be emphasized in this case is that the patient's position compelled him to blow the cornet daily, which undoubtedly produced a congestion of the throat and larynx, yet in spite of this congestion he recovered.

Dr. Wm. Porter, St. Louis: The case presented by Dr. Goldstein is a unique one. It has all of the laryngoscopic evidences of tubercular infiltration, while the clinical history and progress is opposed to it.

I believe this to be a case of slowly developing laryngeal tuberculosis; first, because of the appearance of the larynx; second, because of the condition of the patient; third, because of the recent increase of pain in the larynx and the sputum mixed with blood and, fourth, because there is now comparative dullness and prolonged respiratory murmur at the right pulmonary apex.

The appearance of the larynx with the thickened arytenoids, the infiltrated ventricular bands and the swollen and erect epiglottis form an almost characteristic laryngeal picture. The delay in development is unusual, but we have assured cases of latent tuberculosis in the glands and about the joints. The absence of bacilli from the sputum is not a negation of the tubercular hypothesis, for unless there is tissue necrosis they may not be thrown off.

The history that there was for a time an improvement under treatment is in harmony with the most modern thought. I well remember that when some years ago, I urged the possibility of the cure of laryngeal tuberculosis before the American Laryngological Association, the proposition had very little support. Now all of you know that some of these cases are within the range of relief and in rare instances of cure.

This case is one of those few instances in which the laryngeal invasion is in advance of the pulmonary in manifestation and possibly in point of time. The lung involvement is nearly always antecedent to the laryngeal. In 200 cases of laryngeal phthisis which I compiled for Sir Morell-Mackenzie recorded in his work on Diseases of the Throat there was not one of primary laryngeal disease, although there was thickening in every case, ulceration in twenty per cent and impaired vocal function in ninety-two per cent.

I believe with Heinze that "it is possible that tubercle may be first deposited in the larynx," but it is difficult to establish. I also believe that in recent years the skill of the laryngologist, the use of the curette and applications of lactic acid and local sedatives have done much to lessen the horrors of this very horrible complication.

The Physiology of Voice Production—Wm. Scheppegrell, M.D., New Orleans.

The most conspicious difference between the voice in ordinary speech and the voice in song is in the greater range of the pitch in singing from that used in speaking. The average singer uses from one and a half to two octaves in his vocal efforts, and some well-known artists have reached tones above this range. In speaking,

on the other hand, there is usually not more than three semitones difference in pitch. This difference varies according to the individual speaker. Even in New Orleans, where the vivacious French element is conspicuous, I have frequently observed a difference in tone of a full octave in ordinary conversation. The difference of range in singing and in speech, therefore, is only one of degree.

The noticeable feature in singing is the measure which is present in the majority of vocal productions. Another point of importance in singing is the sustaining of the vowel sounds, this varying according to the expression, *motif*, etc.; but this prolongation of the vowel also exists in ordinary speech, especially observed in an expressive speaker. We know, therefore, that the actual differences in voice production in song and speech are of degree and not of kind.

The essayists offer the classification of the singing voice, namely: The soprano, mezzo-soprano, contralto, tenor, baritone and bass. The difference in these classes may be termed color or *timbre*. The *timbre* refers to that difference which we observe betweeu the flute, flageolet or between any other two instruments in which the sound may be exactly of the same tone and intensity or between which we, nevertheless, note the different tune and the character of the sound-wave and not the rate or strength.

In respiration, the clavicular method of breathing is condemned. It is objectionable not only from a physical, but also from an artistic standpoint. The costal method of breathing does not admit of the same lung capacity as does the diaphragmatic form. The advantages of the diaphragmatic form of breathing have been so well recognized that it is now almost universally used by the professional singer.

Reference is also made to the recognized method of testing the chest capacity by insurance companies. A tape is passed around the chest walls and the candidate for insurance is directed to inflate the lungs, the supposed capacity depending upon the number of inches registered by the tape. Frequently a fictitiously large capacity may be shown by this method in lungs that were comparatively defective, and, on the contrary, a very low capacity in lungs which can really hold an unusually large quantity of air or in which the breathing is of the abdominal style.

Tone placing is a question in the consideration of the voice and the text-books refer to it but meagerly. The vocal cords of the larynx are compared to the tongues of the tuning-fork, and unless

the sound is reinforced there by some substance vibrating in unison with them or by the aid of some resonating cavity, they are but very indistinctly audible.

In the majority of singers whose voices have not been trained the larynx is used in the elevated position, so that the best effects of this reinforcement are not obtained. With the larynx in this position the voice usually looks strong and resonant, although in some cases there is a gain of a few number of tones; many of the baritones will sing the tenor scores and use the voice in this position. It is defective, however, and usually of a "throaty" character.

Tone placing should also be given consideration, of course, to a more limited extent, to the voice in speech, and it is of no little importance, especially in the case of teachers, lawyers and professional speakers where great demands are made on the vocal organs. It has been claimed, and not without reason, that continued speaking is more trying to the voice than the same amount of singing, owing to the fact that the same parts and muscles are brought more frequently into play and that a smaller range of voice is used in speaking.

The inability to correct many of these irregularities occasion many of the affections of the throat and explain many cases of failures in the field of vocal art.

DISCUSSION OF DR. WM. SCHEPPEGRELL'S PAPER.

Dr. M. A. Goldstein directed attention to the fact that schools and systems of vocal instruction were founded long before laryngology was a special science. These symptoms took into consideration the natural forces of voice production without reference to science or anatomy. Whole schools of singing are at variance with the physiology of this area, and the wear and tear of improper tone placing sometimes produces serious results. Neither the exclusive diaphragmatic breathing or the costal breathing are to be considered from the standpoint of the laryngologist as the physiologically proper method of breathing in voice production but rather a rational combination of the two. We should use our endeavors to influence teachers to incorporate a scientific consideration of the physiology of voice production and breathing in teaching.

Temperament and disposition frequently go hand in hand with the quality of the voice. So we see the alto voice accompanied by a manly predisposition in the woman and the tenor voice with effeminate qualifications in the male.

Dr. W. L. Ballenger wishes to elaborate one point made by the speaker, viz.: the "timbre" or color of the voice. The "timbre" depends upon the combinations of over-tone in a high-pipe organ. The basic vibration will move the column of air, breaking it up into long waves of definite length, these are again subdivided into still shorter waves. This subdivision goes on indefinitely until, as shown by the Helmholtz resonators, as many as thirty-four over-tones have been detected in a tone which to the human ear seemed to be a single rich musical tone. In order to get these over-tones in greatest numbers, the method of breathing and tone placement should be so conducted as to bring into action all the resonant chambers from the nose to the chest cavity. Only in this way will the "timbre" be maintained in all registers of the voice.

Dr. Wm. Porter: The address of Dr. Scheppegrell is very timely. I have but little to add to it. Forced function is undoubtedly the cause of many cases of impaired tone and bad training is responsible for much of the unnatural and unpleasant vocal result that we often hear. I am glad that he called attention to the fact that voice should be classified as to quality rather than range, a mistake made by some of our best teachers.

The method of breathing should not be too arbitrary in every case. Each individual should be studied from the standpoint of figure and development. A singer with a long round chest may be trained in a somewhat different way from one who has a short flat chest. I believe that the so-called abdominal method of breathing may be used to the harmful exclusion of everything else. There are three factors in expiration, first, the elasticity of the intra-vesicular wall; second, the elasticity of the osseous and cartilaginous frame, and third, the contractility.

In the purely abdominal method with fixtures of the thoracic wall the second factor is lost. Moreover there is little use of the apex, which though small is important, not only from a health standpoint but as an addendum to the vital capacity of the lung. I teach that the best inspiratory effect is reached by lowering the diaphragm as far as is easily possible and then adding apex inflation until the whole lung shares in the reception of tidal air. The three factors in expulsion combine in the expiratory act, and if a prolonged, sustained note is desired, a final, forced contraction of the extraordinary muscles of expiration (acting mainly on the upper lobes) will add at least five per cent to the continuity of the outward current of air passing through the larynx. In the adoption of methods we must not forget our anatomy and physiology.

A curiosity of laryngeal function is the compensatory arytenoid movement. In a paper published a couple of years ago in the *N. Y. Med. Journ.*, I reported several cases in which the arytenoid of one side did not move to the median line on attempted phonation while the other one passed beyond and approximation was made at one side. In such cases if the tensor power and accuracy are unimpaired and there is no organic lesion of the cords the voice may be unchanged. One of the best known tenors on the American stage has a limitation of arytenoid movement of the left side of at least one-third.

Symmetrical Osteoma of the Nose with Report of a Case—Otto J. Stein, M.D., Chicago, Ill.

Report of a case of bilateral osteoma and review of the literature upon the subject. This paper appears in The Laryngoscope, July, 1900, p. 27.

The Physiologic Tests of the Organ of Hearing as Aids in the Differential Diagnosis of Lesions of the Ear—Wm. L. Ballenger, Chicago, Ill.

The author advocated the physiologic tests of the ear, including the range of hearing, as tested with the tuning fork, Galton whistle, the Weber experiment, the Rinne experiment, the Schwabach and Bing tests, as important aids in the differential diagnosis of the lesions affecting the ear. They are of special importance in determining the location of the lesion. He suggested that in a general way the deeper the structure involved the more pronounced the disturbance of hearing and the less probability of a cure. The tests were therefore recommended more for the purpose of aiding the surgeon in giving a correct prognosis than for the purpose of aiding him in the treatment, which is often unsuccessful. Six cases were cited, illustrating lesions of different kinds in the middle ear and labyrinth, in which the tests were used for the purpose of differentiating them, He recommended that tests be made in all cases of ear disease in which there was marked deafness and tinnitus, both before and after the inflation of the tympanum. If this point is neglected the diagnosis may not be properly made. While the physiologic tests are not absolute guides to a correct diagnosis, they are, together with all other means of diagnosis, the most correct at the command of the aural surgeon, and therefore should be invariably used.

Dr. Pynchon: I will take the privilege of suggesting one point to which the essayist made no reference as regards the application of the water test, and that is that the patient is often in

doubt and states that the sound is best heard in the good ear. In such cases I alternately stop the patient's ears, first one and then the other, and in this way soon dispel the patient's doubts, so he will afterwards reply when the Weber test is being made.

The Etiology of Malignant Tumors—C. ZIEM, M.D., Warsaw, Poland.

Paper read by title. This paper will be published in a subsequent issue of THE LARYNGOSCOPE.

Report of a Case of Mixo-Fibroma of the Naso-Pharynx—HAL FOSTER, M.D., Kansas City, Mo.

This paper appears in THE LARYNGOSCOPE, July, 1900, page 33.

Presentation of Specimen of 107 Polypi Removed at one Sitting—H. W. LOEB, M.D., St. Louis:

This case was unique, not so much on account of the great number of polypi removed from the nose as from the fact that they were removed at a single sitting. They were uniformly pedunculated and varied greatly in size.

Removal of the Middle Turbinate for the Cure of Some Forms of Inveterate Eye Disease—J. O. STILLSON, M.D., Indianapolis.

The author read a very interesting paper upon this subject, in which he reported his observations as to the relationship of nasal and eye diseases and the results he had obtained in allaying eye symptoms by the treatment of nasal conditions, more especially the removal of the turbinate.

Dr. Goldstein, as Chairman of the local Committee of Arrangements, arranged for a museum of pathologic and anatomic specimens which while large, was extremely interesting and marks a new departure in this society.

Decalcified Head Sections—R. J. TERRY, M.D., St. Louis. (Specimens presented by invitation.)

By far the leading feature of the museum of specimens arranged for this meeting were the series of excellent preparations of decalcified head sections, as prepared by Dr. R. J. Terry, of St. Louis.

The sections exhibited at this meeting were made by decalcifying the heads in weak acid, using a knife instead of a saw for cutting the sections.

The details of preparing sections by this method, as originated by Dr. Terry, will be published at a later date. At present the method has been employed for a production of rather thick sections (about one-half inch), especially useful for teaching purposes, It is believed, however, that this process will be of most value when sections can be cut thin enough to be used in preparing "reconstructions of a region."

The heads shown at this meeting had been hardened before decalcification was begun. The soft parts are not damaged by the decalcifying fluid and the sections will stand considerable rough handling.

It was the universal comment that these specimens were the most interesting and well executed sections of head preparations as yet seen.

The officers elected for the ensuing year were as follows:

Dr. M. A. Goldstein, St. Louis, President.

Dr. Würdemann, St. Paul, First Vice-President.

Dr. C. R. Holmes, Cincinnati, Second Vice-President.

Dr. Fayette C. Ewing, St. Louis, Third Vice-President.

Dr. W. L. Dayton, Lincoln, Neb., Treasurer.

Dr. Wm. L. Ballenger, Chicago, Secretary.

Dr. C. R. Holmes, was made Chairman of the Committee of Arrangements for the meeting to be held next year in Cincinnati.

AMERICAN OTOLOGICAL SOCIETY.

The Sixteenth Annual Meeting of the American Otological Society was held at Washington, D. C., May 1, 2 and 3, 1900, in connection with the Fifth Triennial Session of the Congress of American Physicians and Surgeons.

THE LARYNGOSCOPE is pleased to publish herewith, carefully prepared abstracts of the papers presented at this meeting, as arranged by the authors themselves.

Dr. HERMAN KNAPP, New York, after demonstration of some anatomical specimens, related a case of

Extensive Acute Caries of the Mastoid and Petrous Portions of the Temporal Bone,

on which he operated successfully with restoration of perfect hearing, and preservation of the external ear canal and the tympanic cavity.

He sums up the noteworthy features of the case as follows:

1. In an acute tympano-mastoid suppuration in a healthy man, of thirty years of age, who never had had ear trouble before, the tympanum, drumhead and hearing power were restored, while the destruction went on in the mastoid and the adjacent third of a petrous portion of the temporal bone, under formation of an outer fistula of the mastoid.

2. Headache and the continuance of the mastoid disease determined the patient to give his consent to an operation which he had formerly refused.

3. The operation, consisting in a total resection of the mastoid, exposing the dura in the posterior cranial fossa, scooping away all the carious bone in the basal portion of the petrous, and carving out with a sharp spoon the bony wall of the facial canal in its whole length through the mastoid, further the entire horizontal semi-circular canal, forming a platform from the latter to the frontal semi-circular canal, where the caries stopped.

4. The complete and unusually rapid recovery, with integrity of the sound-conducting apparatus, and restoration of perfect hearing. [Operation January 15, 1900; discharged from hospital February 1st; wound closed February 16th; March 1st, h. $^{6}/_{21}$, v. $^{20}/_{20}$.]

Chronic Ear Vertigo; Its Mechanism and Surgical Treatment —C. H. BURNETT, M.D., Philadelphia.

Dr. C. H. Burnett maintains that chronic ear vertigo (Menière's symptoms) is chronologically the latest symptom, or lesion of chronic catarrhal otitis media, being always preceded by profound deafness and tinnitus. It is due to undue impaction of the stapes in the oval window, as well as to stiffening of the round window membrane, from the catarrhal condition of the drum cavity. In a normal ear any inward pressure of the stapes upon the labyrinth fluid is compensated by a corresponding outward movement of the membrane of the round window toward the tympanic cavity. Any undue pressure from within the labyrinth by influx of perilymph or endolymph from the cranial cavity is compensated by a corresponding outward movement of the stapes, as well as, of the round window membrane toward the drum cavity. All or any of these compensations being interfered with, intralabyrinth pressure is increased, the ampullar nerves unduly compressed, and reflex phenomena evoked which are termed ear vertigo. As these altered conditions of intralabyrinth pressure are not constant, but vary with the health of the patient and the state of the drum cavity, chronic

ear vertigo is paroxysmal in nature. As retraction of the chain of ossicles and consequent impaction of the stapes in the oval window, in chronic catarrh of the middle ear play the greatest part in the production of these vertiginous phenomena, Burnett proposes to liberate the stapes from the superposed incus by removal of the latter, through an incision in the upper posterior quadrant of the membrana tympani of the etherized patient. This he has done in twenty-seven cases, giving entire relief from vertigo, in every instance.

Clinical Anatomy of the Eustachian Tube—B. A. RANDALL, M.D., Philadelphia.

Dr. Randall spoke of rediscoveries as to Eustachian catheterization as showing need of better appreciation of the known anatomy. Among all the variables of aural topography the position of the tube-mouths may be counted a constant, since it is essentially related to bony structures of fairly unvarying configuration; and the claims of variation are generally with reference to unrelated nasal and pharyngeal points, instead of to the back edge of the hard palate, which is the true landmark. The lumen of the tube is a slit, usually collapsed and devoid of the "safety tube" at its inner third, while a valve-like fold in its bifurcated lower part serves with the drag of the relaxed palate to insure its closure except in the act of swallowing. Slight variations are to be expected in all points of aural anatomy, but those of the tube having real clinical importance will be very rarely found.

Clinical History of "A Fatal Case of Septic Sinus Thrombosis." By HIRAM WOODS, JR., M.D., Baltimore, Md.

Patient, a boy thirteen years old. Family history of tuberculosis. Measles, when he was two years old, followed by right otorrhea, which has persisted with occasional intervals ever since. Apparently he has never had careful treatment. About the 2d of October, 1899, after a paroxysm of right earache, had a chill, followed by fever. This was repeated each day till October 5th, when the family physician was summoned, who sent patient to the reporter. On admission the boy was in great pain. Temperature 101.6°, pulse 106. There was diffuse mastoid tenderness, the aural canal was filled with a polyp, while the general appearance of the boy was sepsit. He had a septic rigor shortly after admission. Save for these constitutional symptoms of sepsis, there were no indications of sinus involvement. Locally the case presented the picture of internal mastoiditis only. Operation was performed next day.

Mastoid process was eliminated. The polypus above mentioned sprung from a small area of necrotic bone. The inner wall of the mastoid covering sinus was soft. Bone was removed, exposing the sinus for a space of an inch and a half. Dura was necrotic while the external sinus wall was ulcerated, the lumen being plugged above and below by a yellowish fibrinous clot. This was removed with curette, and good blood currents obtained in each direction. Sinus was closed with plain gauze. On the two succeeding evenings there was an elevation of temperature, but no chill. Then, without characteristic change in the thermal line, there developed in the course of ten days a painful swelling in the neck along the inner border of the sterno-mastoid muscle. A large amount of pus was evacuated from the jugular canal, the vein being found collapsed. After this the temperature line became septic. Metastactic abscess developed in different parts of the body. Death occurred on November 11th. General streptococcus infection was found on autopsy, together with a septic thrombus closing the clavicular end of the jugular.

The paper discussed the general question of ligation of the jugular in cases of septic thrombosis where on operation good blood currents are obtained, and there are no symptoms of jugular involvement.

A Case of Chronic Purulent Otitis Media followed by an Abscess in the Temporo-Sphenoidal Lobe and also an Abscess in the Cerebellum—GORHAM BACON, M.D., New York.

The patient, Mrs. A. P., thirty-two years old, had suffered at times from a chronic purulent otitis media (right) since childhood, although of late years it had given her no trouble except that the hearing was defective. For one month past she has complained of severe pain in the right ear and pains in the head. Three days before I saw her the discharge recommenced.

For two weeks she has been confined to her bed, and nine days ago she had two chills on the same day, followed by nausea and vomiting.

As the pain in her head and ear was severe, the family physician prescribed opiates, and when I first saw her at the infirmary on February 13, 1900, she was very stupid and under the influence of the morphine.

Temperature $100^{4}/_{5}$°F., pulse 80, respiration 20. Right external auditory canal full of pus and but little left of the drumhead.

Under ether the usual mastoid operation was performed and pus, offensive in character, granulations and softened bone were removed. No opening could be detected in the tympanic roof, and as

it was difficult to make a diagnosis of an intracranial complication, owing to the admission of morphine, any further operative interference was postponed, February 18th. The pain has continued. To-day she has paralysis of left abducens; paralysis of left side of face; slight left hemiparesis; moderate left hemianesthesia; left hemianopsia and choked discs.

Diagnosis.—Abscess in right temporo-sphenoidal lobe.

Second Operation.—Original wound reopened and the incision carried upwards so that the bone could be thoroughly cut away for a considerable area above the exterior meatus. Dura found thickened but not adherent to the tympanic roof. A small sinus found in the dura and a large abscess located in the right temporo-sphenoidal lobe. About two or three ounces of foul-smelling pus evacuated.

For several days after the operation the patient seemed to improve, but later the paralysis became more marked—also the choked discs. Patient very restless and continually cried out, and a diagnosis was made of probable lepto-meningitis. Patient lived till March 3d.

Autopsy.—The temporo-sphenoidal lobe presented a large abscess cavity passing well back. It had been well drained. The base of brain showed nothing of especial interest. Abscess found in right lobe of cerebellum. Pus foul-smelling and very thick. It appeared to have begun in the dentate body which it destroyed. It then passed across to the opposite lobe which it invaded to the extent of half an inch. The ventricles were found normal. No communication could be demonstrated between these two abscess cavities.

ABSTRACTS AND BIBLIOGRAPHY.

Arranged and Edited by

FAYETTE C. EWING, M.D., St. Louis,

with the collaboration of the

EDITORIAL STAFF.

It is our purpose to furnish in this Department a complete and reliable review of the world's current literature of Rhinology, Laryngology and Otology.
Authors noting an omission of their papers will confer a favor by informing the Editor

I. NOSE.

The Nasal Vestibule as the Seat of Disease—MAXIMILIAN BRESGEN—*Bresgen's Sammlung*, January 15, 1900.

The soft flexible portion of the nose is the one under consideration, and the structure of various portions of its lining is given.

The diseases of the region are of course largely dependent upon those affecting tissues higher up. However, the peculiar cutaneous structure of the lining of this portion of the nose sometimes brings about a condition that does not obtain elsewhere in the nasal cavity. Little cracks and fissures may form which in consequence of acute colds may become covered with crusts. In children the cutaneous irritation may spread until the upper lip and even the cheek are similarly affected. The author considers this condition as peculiarly liable to bring about a lupus, for the reason that the moist and irritated surface is a good harbor for tubercle bacilli. He thinks he has seen cases of lupus that arose in just this way. The same condition of course also offers an open gateway to the germs of erysipelas.

In connection with furuncle of the nasal vestibule Garré is cited. This writer produced a furunculosis by simply rubbing pus cocci into the uninjured hairy skin. Inasmuch as the lining of the vestibule is provided with numerous hairs, the author thinks that this experiment of Garré's is continually repeated by patients endeavoring to rub out the last vestige of thickened secretion from the tip of the nose. VITTUM.

Hemorrhage Into the Conjunctival Sac Through the Nasal Duct, Following an Operation for the Removal of a Nasal Spur—W. F. CLEVENGER—*Med. and Surg. Monitor*, February, 1900.

Rare case of hemorrhage into the conjunctival sac through the lachrymal duct. A young lady suffered for years from partial closure of the left nostril, occasioned by medium-sized spur on the septum, which extended from the anterior of the triangular cartilage past the anterior end of the middle turbinate. Operation

was done with little hemorrhage owing to the use of suprarenal solution. That night hemorrhage occurred upon the nose and corresponding eye. An extended investigation reveals no similar case except the two in the October number of THE LARYNGOSCOPE reported by Dr. Chiari (*Wiener Klin. Wochenschr.*, No. 28, 1899). These cases occurred after the nostril had been plugged with Belloc's cannula on account of epistaxis. The blood forced its way out through the duct. The author believes that an abnormally large tear duct was a factor in his case. F. C. E.

On the Close Relation between the Nasal and Cranial Cavities and some of the Dangers of Such Relationship—WILLIAM C. KRAUSS—*Charlotte Med. Journ.*, January, 1900.

Nasal obstruction in children may retard their cranial development, and the influence of adenoids on mental development is well recognized. Meningitis is not infrequently due to infection from the nasal chambers. SCHEPPEGRELL.

A Case of Carcinoma of the Nasal Passages—J. L. GOODALE—*Journ. Am. Med. Assn.*, February 3, 1900.

The patient was a man fifty-one years old. He had had nasal polypi frequently removed for the past thirty-three years. After removing what appeared to be ordinary polypi, a pale, red mass, the size of an almond, was found springing from the region of the infundibulum. The mass was removed with the cold snare. The microscope showed it to be carcinoma. Death occurred fifteen months after the first indications of malignancy. ANDREWS.

Report of a Case of Echinococcus Cyst of the Nose—W. K. ROGERS—*Journ. Am. Med. Assn.*, February 3, 1900.

Two years after the removal of what appeared to be an ordinary polypus, another growth occurred at the same spot. In removing it with the snare it ruptured and a considerable quantity of straw-colored fluid escaped. Microscopic examination of the cyst walls showed numerous echinococcus hooklets. No evidence could be found of intestinal parasites. ANDREWS.

Removal of One Hundred and Seven Polypi at One Sitting—H. W. LOEB—*St. Louis Courier of Med.*, Jan., 1900.

The patient had many polypi on each side of the nose, and on account of an orbital cellulitis, it was deemed advisable to remove them at once. With his electro-cautery snare Loeb removed sixty-eight from the left and fifty-nine from the right fossa—107 in all. It required three-quarters of an hour to remove them, and during that time the patient lost only one ounce of blood. The case is reported to call attention to the ease with which the operation may be done with the electro-cautery snare, the author claiming that with the cold snare the number could not have been removed at one sitting. Though objections have been urged against the electro-cautery snare on the ground that it is necessary to renew the steel wires often, the author used only four in the operation. EATON.

II. MOUTH AND NASO-PHARYNX.

Two Cases of Infectious Phlegmonous Inflammation of the Base of the Tongue as a Consequence of Angina Tonsillaris Lingualis—BAYER—*Bresgen's Sammlung*, Band IV, No. 2.

The title largely covers the points of interest. Both subjects were gouty. In one an abscess formed and broke while the other passed off without a definite abscess, but was followed by an attack of gout.

VITTUM.

Some of the Causes and Effects of Mouth Breathing—J. M. INGERSOLL—*Buffalo Med. Journ.*, January, 1900.

E. D. LEDERMAN.

Nose and Throat Clinic of the Presbyterian Eye, Ear and Throat Charity Hospital, Baltimore, July 18, 1899—*Journ. Eye, Ear and Throat Diseases*, Vol. iv, No. 3, July, 1899.

Six cases are reported. None are of special interest.

EATON.

The Minor Surgery of the Nose and Throat—GEO. L. RICHARDS—*Internat. Journ. of Surg.*, October, 1899.

This article is designed to explain some of the simpler operations in the nose and throat to the general practitioner. The procedure discussed embraces the galvano and chemical cautery, removal of polypi, medication of atrophic rhinitis, opening of peritonsillar abscess and plugging for nose-bleed. F. C. E.

Chronic Non-Suppurative Catarrhal Otitis—JOHNSON ELIOT—*Va. Med. Semi-Monthly*, March 9, 1900.

The report of a number of cases in which massage of the ossicles combined with hot-air inflations gave beneficial results.

SCHEPPEGRELL.

Surgery of the Turbinated Bones—J. A. STUCKY—*Louisville Monthly Journ. of Med. and Surg.*, March, 1900.

A review of the anatomy and physiology of the surgeon and a description of the surgical technique. SCHEPPEGRELL.

A Case of Diphtheric Sore of the Lower Lip with Secondary Infection of the Throat—JNO. R. ROSE—*Ga. Journ. of Med. and Surg.*, February, 1900.

Infection was due to moistening the thumb with the lower lip while distributing mail, the lip being at the same time much chapped. Both the lesion on the lip and the secondary infection of the throat resisted treatment until anti-diphtheric serum was administered. There is no reference to a bacteriological examination.

SCHEPPEGRELL.

An Epidemic of Follicular Tonsillitis and its Period of Incubation—F. SIEGERT—*Münchener Med. Wochenschr.*, No. 47.

During a strictly neighborhood epidemic of this character the author was enabled to watch carefully the course of the disease from one house to another, and to note the time which intervened between exposure and the first symptoms.

His conclusion is that the period of incubation for follicular tonsillitis is four days. The final paragraph of his paper is as follows: "Follicular tonsillitis is an infectious disease with a period of incubation of four days, and is easily communicated from the patient to a healthy person. Nursing infants and children up to the third year seem less disposed to acquire the disease than older persons, but are not exempt. The isolation of those suffering from sore throat should be carried out to the best of our ability, on account of the frequent septic and pyemic complications. Brothers and sisters of the patients should be kept from school until the expiration of the fifth day." VITTUM.

The Influence of Nasal Diseases on Facial Expression—R. KAYSER—*Bresgen's Sammlung*, January 15, 1900.

A consideration of the different forms of the nose and of the external changes wrought by disease. The author is of the opinion that platyrrhinia is the form of nose best suited to the development of ozena. VITTUM.

Pemphigus of the Mucous Membrane as a Cause of Adhesion of the Soft Palate to the Posterior Pharyngeal Wall, and the Treatment of this Condition with Hard Rubber Bougies—GEORG AVELLIS—*Münchener Med. Wochenschr.*, March 6.

The author could find only three cases of this condition recorded in literature and to these he now adds a fourth. The cause of the adhesion was at first obscure, but during his observation of the case he was successful in discovering some fresh vesicles, so that the diagnosis of pemphigus was firmly established. A very small passage existed between the pharynx and naso-pharynx, barely large enough to admit a small probe, but wholly inadequate to breathing purposes or to permit sufficient air to enter so that the patient could blow his nose.

The adhesions were incised on each side so that a bougie the size of the thumb could pass. A number of Hegar's hard rubber bougies of various sizes were then bent into the shape of the letter S. The size used was the one which could just be forced through the opening. It was then pushed up until the lower curve rested just over the lower incisor teeth, thus exerting a constant dragging effect on the palate.

This was done by the patient six to ten times daily for four months. Various other devices were tried, but none seemed so efficacious as this. The result has been satisfactory. Avellis refers to three cases of narrowing of the aditus and laryngem which have been reported as having the same origin. VITTUM.

III. ACCESSORY SINUSES.

The Modern Treatment of Dental Cysts and Empyema of the Antrum — SACHS — *Münchener Med. Wochenschr.*, February 13, 1900.

At a meeting of the Medical Society of Leipzig, held December 19, Sachs read a paper on the above subject. After giving *in extenso* the etiology of the 'dental cyst, he comes to speak of those cases where the cyst wall breaks through the floor of the antrum and fills that cavity completely, sometimes breaking through the partition between the antrum and the nasal cavity and emptying into the latter. The diagnosis is established by the character of the discharge. In treating these cases the author advises that under local anesthesia a good-sized piece of the cyst and the gum be removed with Cooper's scissors and the cyst washed out. The only care is that the opening shall not close too soon. He says that even the tooth whose root is the seat of the cyst need not be extracted provided that its condition is such as to permit of a good firm filling of the nerve canal. In regard to the opening of the antrum by Küster's method, the author proposes a modification of his own devising which he thinks will overcome the tendency to too rapid closure of the opening. VITTUM.

A Case of Empyema of the Frontal Sinus—F. T. ROGERS—*Journ. Eye, Ear and Throat Dis.*, March-April, 1900.

A woman, aged forty, had suffered several years after an operation upon the nose, with severe frontal headache. There was swelling of the left upper lid, and pressure over the inner canthus exceedingly painful. Large masses of polypoid growth were removed from the left nasal fossa, and finally the left frontal sinus was opened with chisel and mallet and found filled with polypi and offensive pus. The cavity was curetted and a large free opening made into the nose.

The patient apparently recovered, but soon the pain returned, this time on the right side, and the right sinus was curetted in the same way, but suppuration continued for a month when the probe revealed extensive denudation of the periosteum extending over a considerable portion of the frontal bone. A large sequestrum was found and removed exposing the superior longitudinal sinus for nearly two inches, and the dura over a space extending from the median line to the middle of the frontal eminence on the right side. Recovery was uneventful. EATON.

IV. LARYNX AND TRACHEA.

Primary Epithelioma of the Trachea—E. BOSCHI—*Bollettino Delle Scienze Mediche di Bologna*, Ser. VII, Vol. XI, 1900.

The author gives the following interesting clinical history: In a man, aged sixty, examination of the sputum showed only the presence of red blood corpuscles and leucocytes. The examination of the thorax and larynx was negative. He developed signs of tracheal stenosis, and died of broncho-pneumonia. In the latter period two facts were constantly noticed—a slight descending pulsation of the larynx, and an intense pulsation of the larynx and trachea laterally from left to right.

The post-mortem was limited only to the thoracic cavity and showed the presence of a tumor in the inferior half of the trachea, the tumor having compressed the trachea from the bifurcation to five centimeters above.

The tumor was found to be a cylindrical epithelioma. This rare and very interesting case shows that the symptom of "tugging" insisted on by Oliver and Cardarelli cannot be looked upon as pathognomonic of aneurism of the arch of the aorta.

FERRERI. (StClair Thomson, Trans.)

Tuberculosis of the Larynx—S. G. DABNEY—*Am. Pract. and News*, January 1, 1900.

Tuberculosis of the larynx before any manifest involvement of the lungs is not a great rarity. In many cases the diagnosis can be made almost positively from the local appearances alone. The prognosis, while exceedingly grave, is not so desperate as was formerly taught. In addition to the medicinal, hygienic and climatic treatment, local measures often do much to increase comfort and prolong life, and occasionally cure the local lesion. The first step in local treatment is to thoroughly cleanse the surface, for which Seiler's solution in an atomizer is fairly effective.

Where there is ulceration, the cleansing should be followed by insufflation of orthoform and iodoform or nosophen. If pain persists, five per cent solution of eucaine B should be sprayed into the larynx before eating. A ten to twenty per cent solution of menthol in oil may also be used with benefit. Where the ulcer is accessible and the conditions permit, lactic acid should be rubbed into it, either with or without previous curettage. SCHEPPEGRELL.

Angina with Endocarditis—ROEGER—*Münchener Med. Wochenschr.*, February 20, 1900.

The author found a murmur to be present in about 25% of the cases of angina of all sorts except those accompanied by an exanthem and the diphtheritic forms. In about half of these the murmur persisted seven to thirty days after the angina had disappeared. In a little over half the cases where a murmur was discovered, there appeared a herpetic eruption on the tonsils, the buccal mucous membrane and the soft palate. VITTUM.

V. EAR.

Report of a Case of Brain and Other Abscesses, Following Tonsillar Abscess and Non-Perforative Suppurative Otitis Media—D. MILTON GREENE—*Journ. Am. Med. Assn.*, November 11, 1899.

The most interesting feature of this case is the peripheral symptoms caused by the central pathology. At one time in the course of the disease the patient was able to say but the one word "No." The author believes there was disturbance of the "utterance center," of Broadbent. Paralysis of the entire right side of face, body and extremities occurred. A large abscess was found two inches above the auditory meatus. After operation speech gradually returned and the paralysis fully recovered. ANDREWS.

Four Cases of Cerebellar Abscess—B. ALEX. RANDALL—*Journ. Am. Med. Assn.*, November 11, 1899.

The first case was that of a boy, fifteen years old, with chronic suppurative otitis media. Directly following a slap on the ear mastoid symptoms developed. In the mastoid operation no cranial sinus could be found, but the autopsy showed a small cerebellar abscess, and destruction of lung tissue. The route of cranial infection was not discovered. In the second case there had been extensive destruction of bone between the mastoid and the cranial cavity. Two weeks later cranial symptoms developed, and in a second operation, while enlarging the cranial opening backward, the rougem bit off the large mastoid emissary close to the sigmoid sinus. The operation was abandoned because of hemorrhage. Death, four days later, was evidently caused by a cerebellar abscess. The author believes he should not have attempted to enlarge the cranial opening, but should have made an additional opening. The third case was typical and recovered. In the fourth case a large cerebellar abscess was found and evacuated, but the patient died suddenly a few hours after the operation. ANDREWS.

Infective Sinus Thrombosis—FRED WHITING—*Journ. Am. Med. Assn.*, October 28, 1899.

The local and systemic conditions found in sinus thrombosis constitute three stages:

1. The thrombus, composed of fibrin, red blood corpuscles, exfoliated endothelium, leucocytes and protoplasmic cells, has not undergone degeneration, and the systemic symptoms, pyrexia and rigors are insignificant.

2. The thrombus has undergone degeneration with the resulting systemic absorption, characterized by rigors and pronounced septicopyemic fluctuations of temperature.

3. The thrombus disintegrating with systemic absorption accompanied by rigors, rapid and great fluctuations of temperature, and central or peripheral embolic metastases, terminating usually in septic pneumonia, enteritis, or meningitis. ANDREWS.

VI. DIPHTHERIA, THYROID GLAND, ESOPHAGUS, ETC.

Early Intubation in Laryngeal Diphtheria—WILLIAM E. LOWER —*The Cleveland Med. Gaz.*, January 1, 1900.

The author states that in no small per cent of the fatal cases, the death is due to suffocation from laryngeal obstruction, when intubation is not practiced, or to broncho-pneumonia following late intubation.

The advantages claimed in favor of early intubation are: The child is stronger, can bear the operation better, the time for wearing the tube is lessened, there is less opportunity for the introduction of septic material into the trachea, and consequently of septic or broncho-pneumonia, which is nearly always the cause of death.

In all cases of diphtheria serum treatment should be practiced, and the earlier the better.

The indication then for intubation is the very beginning of laryngeal obstruction. A. K. MACLEAN.

Strictures of the Esophagus with a Device for their Dilatation —TUCKERMAN—(Society Proceedings, December 7, 1899), *The Cleveland Med. Gaz.*, January, 1900. A. K. MACLEAN.

Some Ocular and Aural Manifestations of Hysteria—H. GIFFORD —*Western Med. Review*, November 15, 1899.

The author reports three cases of aural manifestations of hysteria, two of which are of great interest, but he questions the hysterical nature of the other case.

A girl of eighteen years was found to be totally deaf to all tests, though the ears were objectively normal. The hearing was suddenly lost after an attack of tonsillitis, of which the girl had frequent attacks. It was reported that the "throat broke" and the girl fainted. When consciousness returned the hearing was gone.

Another attack of tonsillitis occurred in a few days, with a reported "breaking of the throat," and the hearing returned, suggestion arising from pain in the ears due to tonsillitis doubtless caused the hysterical deafness. A man of twenty-four years, whose ears appeared practically normal, reported a total loss of hearing after soreness and severe pain in the ears. The deafness continued about four years, in which period he was treated with pilocarpin without good results, at the end of that time he was treated by a woman magnetic healer with a complete cure. The man had frequently amused himself by appearing to be deaf. When the ears became painful and the hearing slightly impaired, suggestion of retribution probably induced the hysteria. D. W. DETWILER.